

## Curriculum Vitae

**Alan P. Marscher**

**Address** Department of Astronomy, Boston University  
725 Commonwealth Ave.  
Boston, MA 02215

**Phone** 617-353-5029 **Fax** 617-353-5704

**Education** Ph.D., Astronomy, University of Virginia, 1977  
M.S., Astronomy, University of Virginia, 1974  
B.S., Engineering Science, Cornell University, 1973

### **Positions Held**

1992-present Professor of Astronomy, College of Arts and Sciences, Boston University  
2017-2019, 2023-2024 Associate Chair, Department of Astronomy, Boston University  
2015-2016 Acting Chair, Department of Astronomy, Boston University  
2011-2015 Director, Institute for Astrophysical Research, Boston University  
2013-2014 Associate Director, Core Curriculum, College of Arts and Sciences, Boston University  
2003-2007 Director, Center for Excellence in Teaching, Boston University  
1999-2003 Associate Dean, College of Arts and Sciences, Boston University  
1990-91 Visiting Scientist, Smithsonian Astrophysical Observatory  
1987-1997 Chair, Department of Astronomy, Boston University  
1987-1992 Associate Professor of Astronomy, Boston University  
1986-1987 Chairman *ad interim*, Department of Astronomy, Boston University  
1981-1987 Assistant Professor of Astronomy, Boston University  
1978-1981 Postgraduate Research Physicist, U. of California, San Diego  
1977-1978 NAS-NRC Postdoctoral Research Associate at NASA Goddard  
Space Flight Center  
1976-1977 Junior Research Associate (Thesis Student), National Radio  
Astronomy Observatory, Charlottesville, Virginia  
1976-1977 Instructor of Physics, Mary Baldwin College, Staunton, Virginia  
1975 Summer Student, National Radio Astronomy Observatory

**Honors** Co-recipient of 2024 Bruno Rossi Prize awarded to the Imaging X-ray  
Polarimetry Explorer Collaboration by the High Energy Astrophysics  
Division of the American Astronomical Society  
Co-recipient of 2021 Royal Astronomical Society Group Achievement Award,  
awarded to the Event Horizon Telescope Collaboration  
Co-recipient of 2020 Breakthrough Prize in Fundamental Physics awarded to  
the Event Horizon Telescope Collaboration  
Co-recipient of 2020 Einstein Prize awarded to the Event Horizon Telescope  
Collaboration by the Albert Einstein Society  
Co-recipient of 2020 Bruno Rossi Prize awarded to the Event Horizon Telescope Collaboration  
by the High Energy Astrophysics Division of the American Astronomical Society  
Co-recipient of Nelson P. Jackson Aerospace Award awarded to the Event Horizon  
Telescope Collaboration by the National Space Club & Foundation  
Co-recipient of 2019 inaugural Diamond Achievement Award bestowed by  
the National Science Foundation to the Event Horizon Telescope Collaboration  
Recipient of 2014 Metcalf Award for Excellence in Teaching, Boston University  
Recipient of 1998 Gitner Award for Distinguished Teaching, College of  
Arts and Sciences, Boston University

Distinguished Member of the National Society of Collegiate Scholars (inducted in 2003)  
Polytropos Award, Core Curriculum, College of Arts & Sciences, Boston University (2003)  
Member of Phi Beta Kappa (inducted in 1999)  
Vice President, LYCHNOS Graduate Honor Society, University of Virginia

**Ph.D. Thesis** “Effects of Nonuniform Structure in Compact Synchrotron Sources”

**Ph.D. Advisor** Dr. Robert L. Brown, National Radio Astronomy Observatory

**Professional Societies** American Astronomical Society

International Astronomical Union

American Association for the Advancement of Science

### Major Professional Committees

Chair, Technical Working Group on Blazars and Radiogalaxies, Imaging X-ray Polarimetry Explorer (IXPE) mission, 2018–present

Chair, Imaging Group of the Event Horizon Telescope collaboration, 2018–2019

Member, Long Baseline Observatory Advisory Council, 2017–2018

Chair, NASA Fermi Gamma-ray Space Telescope Users Group, 2009–2013

Member, Electorate Nominating Committee, Section on Astronomy, American Association for the Advancement of Science, 2007–2010

Member, external oversight committee for the VERITAS  $\gamma$ -ray Cherenkov telescope, 2003–2007

Member, NASA Gamma-ray Large Area Space Telescope Users Committee, 2003–2007

Member, Committee of Visitors, Division of Astronomical Sciences, National Science Foundation, 2005

Member, *ad hoc* panel to map the future of VLBI research in the US, 2003

Member, Panel on Radio and Submillimeter Astronomy, Decadal Astronomy and Astrophysics Survey, National Academy of Sciences, 1998–2000 & 2004–2005

AUI Visiting Committee for the National Radio Astronomy Observatory, 1992–95 (chair 1994–5)

National Science Foundation Advisory Committee on Astronomical Sciences, 1988–92

National Radio Astronomy Observatory Users Committee, 1984–87, 1990–93

ARISE Space VLBI Advisory Committee, 1998–1999

NASA Compton Gamma Ray Observatory Users Committee, 1995–98

Secretary-Treasurer of High Energy Astrophysics Division of the American Astronomical Society, 1997–99

Chairman of Nominating Committee, High Energy Astrophysics Division of the American Astronomical Society, 1988

At-large member of Very Long Baseline Interferometry telescope consortium, 1984–88

Various panels reviewing funding proposals for NASA and NSF

Various scientific organizing committees for astronomical conferences

Member of panel reviewing proposals to use the Very Long Baseline Interferometer Network, 1982–89

Member of panel reviewing proposals to use the Coordinated Millimeter-Wave VLBI Array, 1995–2000

Member of board of Associated Universities for Research in Astronomy, 1993–1994

### Major University Committees

College of Arts & Sciences (CAS) Academic Policy Committee, 2017–2020

CAS Natural Sciences Curriculum Committee, 1984–86, 2009–12, 2016–17

Provost’s Teaching Award Committee, 2015–16

Provost’s Advisory Board on Distance Education, 2007–08

Advisory Board, Center for Excellence in Teaching, 2000–2003

Core Curriculum science development committee, 1987–89, 91–92

(chair, 1988–89,91–92)  
College of Liberal Arts (CLA) Academic Policy Committee, 1988-90 (chairman, 1988-89)  
Integrated Core Curriculum development committee, 1985–88  
CLA Petitions Committee, 1983–84

### **Courses Taught**

CC 105 Evolution of the Universe and of the Earth (Core Curriculum)  
AS 101 The Solar System (for non-science majors)  
AS 102 The Astronomical Universe (for non-science majors)  
AS 105 Survey of the Universe (for non-science majors)  
AS 109 Cosmology (for non-science majors)  
AS 312 Stellar and Galactic Astronomy (for science majors)  
AS 413 Extragalactic Astrophysics & Cosmology (for science majors)  
AS 503 Galactic Astronomy (graduate level)  
AS 701 Introduction to Astrophysics (graduate level)  
AS 706 Radiative Processes and Spectroscopy (graduate level)  
AS 711 Cosmic Mechanics & Dynamics (graduate level)  
AS 712 Radiative Processes in Astrophysics (graduate level)  
AS 755 Radio Astrophysics (graduate level)  
AS 757 High Energy Astrophysics (graduate level)  
AS 793 Graduate seminar on quasars and active galactic nuclei  
PH 101/102 Introductory Physics (non-calculus, at Mary Baldwin College)

### **Supervision of Theses and Dissertations**

Apostolos Mastichiadis (Ph.D., 1985) (joint supervision with K. Brecher)  
Sridhar Subramanian (M.A., 1986)  
James C. Kilian (M.A., 1986)  
Linda Shore (M.A., 1986)  
Ruth A. Daly (Ph.D., 1987)  
Steven D. Bloom (Ph.D., 1994)  
Yun Fei Zhang (Ph.D., 1994)  
Matthew L. Lister (Ph.D., 1998)  
Markos Georganopoulos (Ph.D., 1999)  
Andrei Sokolov (Ph.D., 2004)  
Ritaban Chatterjee (Ph.D., 2009)  
Francesca D’Arcangelo (Ph.D., 2009)  
Monica Bruecker Young (Ph.D., 2010) (Joint supervision with M. Elvis)  
Michael Malmrose (Ph.D., 2016)  
Nicholas MacDonald (Ph.D., 2016)  
Mason Keck (Ph.D., 2019)  
Zachary Weaver (Ph.D., 2022)

### **Narrative Summary of Academic Activities at Boston University**

I have taught a number of Astronomy courses for non-majors, majors, and graduate students while at Boston University, both in Astronomy and in the Core Curriculum of the College of Arts and Sciences. The Core course was CC 105, The Evolution of the Universe and the Earth, I was the primary architect of the course, but a number of other professors contributed substantially. I was the course coordinator (lead faculty member) of the course from 1989 to 2002, save for two sabbatical years, and again in 2013 and 2014. I have written a textbook for the course entitled *From Nothing to Everything: The Story of the Universe*, which is available as an e-book, with free downloads, for AS109 and CC105 students, as well as the public. It was also used in an introductory astronomy course at the University of Michigan by Prof. Philip Hughes and at Williams College by Prof. Karen Kwitter. I compose pop songs for AS109 and

CC105 and perform them in my lectures. The textbook and recorded versions of songs are available at the website [www.bu.edu/blazars](http://www.bu.edu/blazars).

### **Narrative Summary of Current Research**

I and my research group study the extremely energetic plasma jets that emanate from a class of active galactic nuclei called “blazars” (radio-bright quasars and BL Lacertae objects, whose brightness tends to be highly variable and whose continuum spectra are non-thermal). The general consensus of the field is that ultra-massive (over a billion solar masses) black holes residing at the center of many galaxies power blazars as they accrete matter from their surroundings. The black holes swallow most of the gas and dust, but expel a small fraction in winds and jets along the rotation axes, at flow speeds very close to the speed of light. Such relativistic motions create illusions of faster-than-light speeds and beams the radiation emitted such that observers viewing the jet almost along the axis measure a very high brightness that varies on timescales as short as hours. The work of my group focuses on monitoring the changing brightness at radio, infrared, X-ray, and gamma-ray frequencies as well as the evolving radio-frequency structure of the jet on sub-milliarsecond scales. Telescopes used currently include the international Event Horizon Telescope (I am part of the EHT Collaboration that imaged the emission surrounding the black hole in the galaxy M87) and Global Millimeter VLBI Array (GMVA), the Very Long Baseline Array (VLBA) and Very Large Array of the National Radio Astronomy Observatory, NASA’s Hubble Space Telescope, Spitzer Space Telescope (infrared), Chandra X-ray Observatory, Rossi X-Ray Timing Explorer (RXTE), Swift, NuSTAR, NICER, and XMM-Newton (X-ray) satellite observatories, Fermi Gamma-ray Space Telescope, and the Boston University Perkins Telescope and Lowell Discovery Telescope.

In addition to this observational program, I lead my group in theoretical studies focused on the radiative processes and gas dynamics that occur in the jets of blazars. The main goal is to provide models that can be used to interpret images, polarization, and multifrequency monitoring observations of blazars in the hopes of figuring out the physics of jets: what produces them (what evidence can we obtain that it is really an accreting supermassive black hole?), what focuses and accelerates their flows to speeds very close to the velocity of light (twisting magnetic fields, gas pressure, or radiation pressure?), what accelerates the electrons to ultrarelativistic energies (shock waves - transverse to the jet axis or oblique? reconnection of magnetic fields? turbulence?), and what processes affect the emission (bends in the jet, accelerations in the flow, instabilities, precession?).

An extensive website on the research of my group is located at <http://www.bu.edu/blazars>. The site includes background information, many images of jets, and some animations of sequences of images and light curves as well as artists’ conceptions of the activity at the heart of a quasar.

### **Narrative Summary of Administrative Experience at Boston University**

From 2017 to the present time, I have been Associate Chair of the Astronomy Department. In 2015-16, I served as Acting Chair of the department. From 2011 to 2015, I was the Director of the Institute for Astrophysical Research . The IAR promotes research, education, and public outreach in astrophysics at BU. It also administers external funding grants in astrophysics as well as Boston University’s partnership with Lowell Observatory for use of the 1.8-meter-diameter Perkins Telescope outside Flagstaff, Arizona.

From September 2013 to December 2014, I served as an associate director of the Core Curriculum in the College of Arts and Sciences, Boston University. In this capacity, I was lead instructor of the physical science course CC105, and advised the Core director on current and future directions of the program.

Between 2003 and 2007, I was the Director of the Center for Excellence & Innovation in Teaching (CEIT) at Boston University. The CEIT operates a variety of programs designed to assist instructors who wish, for example, to improve their classroom performance, modernize their teaching techniques (e.g., through use of the web), or administer their courses more effectively.

From January 1999 to June 2003 I was an Associate Dean in the College of Arts and Sciences at Boston University (half-time), with primary responsibility for faculty issues. Among my main duties were design and oversight of the College web site, running of orientation programs for new graduate teaching fellows and new "adjunct" faculty, coordination of continuing programs of language instruction for international graduate teaching fellows, identifying physical problems in classrooms that need to be fixed and acting as a liaison between instructors and Media Group, formation of a panel to determine recipients of College teaching awards, compilation of grading statistics in Arts and Sciences courses, and providing guidance to departmental chairs and to faculty.

I served as chair of the Department of Astronomy from 1986 to 1997. During that time, the size of the academic faculty grew from 8 to 15 members, while that of the research faculty increased from 1 to 7. The department thrived in all areas (as it continues to do), especially in grant and contract activity and the teaching of undergraduate students.

## BIBLIOGRAPHY

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### Books

Marscher, A.P., DePaor, D.G., Mohr, S.C., and Whitaker, J.S. *From Nothing to Everything: The Evolution of the Universe and the Earth* (Boston: Pearson Custom Publishing) (2002). Textbook for Boston University Core Curriculum physical science course.

Marscher, A.P. *From Nothing to Everything: The Story of the Universe*, 2023, published as an e-book, distributed *gratis* to students and the public. The book is available for free download at <http://www.bu.edu/blazars/textbook.html>.

### Refereed Journal Papers

1. Bergh, S. van den, Marscher, A.P., and Terzian, Y. “An Optical Atlas of Galactic Supernova Remnants,” 1973, *Astrophysical Journal Supplement Series*, **26**, 19-36 (no. 227).
2. Marscher, A.P., and Brown, R.L. “An Interpretation of the Radio Outbursts of Cygnus X-3,” 1975, *Astrophysical Journal*, **200**, 719-726.
3. Goldstein, S.J., Marscher, A.P., and Rood, R.T. “On the Aggregate Flux of Weak Point Sources at 1400 MHz,” 1976, *Astrophysical Journal*, **210**, 321-325.
4. Brown, R.L., and Marscher, A.P. “Energetic Secondary Electrons in Dense Interstellar Clouds,” 1977, *Astrophysical Journal*, **212**, 659-663.
5. Marscher, A.P. “Effects of Nonuniform Structure on the Derived Physical Parameters of Compact Synchrotron Sources,” 1977, *Astrophysical Journal*, **216**, 244-256.
6. Marscher, A.P. “Structure of Radio Sources with Remarkably Flat Spectra: PKS 0735+178,” 1977, *Astronomical Journal*, **82**, 781-784.
7. Marscher, A.P. “Relativistic Blast-Wave Model for Superlight Motion in Compact Double Radio Sources,” 1978, *Astrophysical Journal*, **219**, 392-399.
8. Brown, R.L., and Marscher, A.P. “Are Supernovae Radio Sources? A Search for Radio Emission from Young Supernova Remnants,” 1978, *Astrophysical Journal*, **220**, 467-473.
9. Marscher, A.P., and Brown, R.L. “Origin and Evolution of the Radio Emission from Immediate Post-Outburst Supernovae,” 1978, *Astrophysical Journal*, **220**, 474-483.
10. Marscher, A.P., and Brown, R.L. “Energetic Secondary Electrons and the Nonthermal Galactic Radio Background: A Probe of the Magnetic Field in Interstellar Clouds,” 1978, *Astrophysical Journal*, **221**, 588-597.
11. Marscher, A.P. “Relativistic Blast-Wave Model for the Rapid Flux Variations of AO 0235+164 and Other Compact Sources,” 1978, *Astrophysical Journal*, **224**, 816-825.

12. Marscher, A.P. “Interaction between Emission Line Filaments and Highly Energetic Explosions in QSOs,” 1978, *Astrophysical Journal*, **225**, 725-731.
13. Marscher, A.P., and Weaver, R.P. “On the Formation and Confinement of Dense Clouds in QSOs and Active Galactic Nuclei,” 1979, *Astrophysical Journal*, **227**, 705-709.
14. Marscher, A.P. “Absorption Models for Low-Frequency Variability in Compact Radio Sources,” 1979, *Astrophysical Journal*, **228**, 27-33.
15. Marscher, A.P., Marshall, F.E., Mushotzky, R.F., Dent, W.A., Balonek, T.J., and Hartman, R.F. “Search for X-Ray Emission from Bursting Radio Sources,” 1979, *Astrophysical Journal*, **233**, 498-503.
16. Shaffer, D.B., and Marscher, A.P. “VLBI Observations of Galactic Nuclei at 18 cm,” 1979, *Astrophysical Journal (Letters)*, **233**, L105-L108.
17. Marscher, A.P. “Relativistic Jets and the Continuum Emission in QSOs,” 1980, *Astrophysical Journal*, **235**, 386-391.
18. Marscher, A.P., and Scott, J.S. “Superluminal Motion in Compact Radio Sources,” 1980, *Publ. Astron. Soc. Pacific*, **92**, 127-133.
19. Marscher, A.P., and Shaffer, D.B. “VLBI Observations at 18 and 2.8 cm: 0133+47, 0735+178, OH471, OQ172, 1633+38, and NRAO 667,” 1980, *Astronomical Journal*, **85**, 668-672.
20. Marscher, A.P. “Spontaneous Formation of Knots in Relativistic Flows: A Model for Variability in Compact Synchrotron Sources,” 1980, *Astrophysical Journal*, **239**, 296-304.
21. Marscher, A.P., Vestrand, W.T., and Scott, J.S. “Neutrino, Gamma-Ray, Electron, and Positron Production in an Ultrarelativistic Plasma,” 1980, *Astrophysical Journal*, **241**, 1166-1174.
22. Rothschild, R.E., Baity, W.A., Marscher, A.P., and Wheaton, W.A. “Nonthermal Hard X-Ray Emission from the Nucleus of NGC 1275,” 1981, *Astrophysical Journal (Letters)*, **243**, L9-L12.
23. Vestrand, W.T., Scott, J.S., Marscher, A.P., and Christiansen, W.A. “Effects of Gamma-Ray, Neutrino, and Particle Production on the Energetics and Dynamics of Compact Extragalactic Radio Sources,” 1981, *Astrophysical Journal*, **245**, 811-817.
24. Marscher, A.P., and Broderick, J.J. “Distance-Independent Evidence for Relativistic Motion in the Quasar NRAO 140,” 1981, *Astrophysical Journal (Letters)*, **247**, L49-L52.
25. Marscher, A.P., and Broderick, J.J. “X-Ray and VLBI Radio Observations of the Quasars NRAO 140 and NRAO 530,” 1981, *Astrophysical Journal*, **249**, 406-414.
26. Marscher, A.P., and Burbidge, E.M. “Rotating Compact Radio Sources and Angular Momentum Transfer from the Nucleus to Outlying Gas in Active Galaxies,” 1982, *Astrophysical Letters*, **22**, 83-87.
27. Marscher, A.P., and Broderick, J.J. “Apparent Superluminal Motion in the Quasar NRAO 140,” 1982, *Astrophysical Journal (Letters)*, **255**, L11-L15.

28. Junkkarinen, V.T., Marscher, A.P., and Burbidge, E.M. “Einstein X-Ray Observations of QSOs with Absorption-Line Systems,” 1982, *Astronomical Journal*, **87**, 845-848.
29. Marscher, A.P. “Accurate Formula for the Self-Compton X-Ray Flux Density from a Uniform, Spherical, Compact Radio Source,” 1983, *Astrophysical Journal*, **264**, 296-297.
30. Marscher, A.P., and Broderick, J.J. “VLBI Observations of the Quasars CTD20 (0234+285), OJ248 (0827+243), and 4C19.44 (1354+195), and the Millimeter-X-Ray Connection,” 1983, *Astronomical Journal*, **88**, 759-763.
31. Marscher, A.P., Brecher, K., Wheaton, W.A., Ling, J.C., Mahoney, W.A., and Jacobson, A.S. “Search for 511 KeV Electron- Positron Annihilation Radiation from Mildly Active Galaxies Using the HEAO-3 Gamma-Ray Spectrometer,” 1984, *Astrophysical Journal (Letters)*, **281**, 566-569.
32. Marscher, A.P., and Broderick, J.J. “Multifrequency Radio VLBI Observations of the Superluminal, Low-Frequency Variable Quasar NRAO 140.” 1985, *Astrophysical Journal*, **290**, 735-741.
33. Marscher, A.P., and Gear, W.K. “Models for High-Frequency Radio Outbursts in Extragalactic Sources with Application to the Early 1983 Millimeter to Infrared Flare of 3C273,” 1985, *Astrophysical Journal*, **298**, 114-127.
34. Mastichiadis, A., Marscher, A.P., and Brecher, K. “Electron-Positron Pair Production by Ultrarelativistic Electrons in a Soft Photon Field,” 1986, *Astrophysical Journal*, **300**, 178-189.
35. Mastichiadis, A., Brecher, K., and Marscher, A.P. “Electromagnetic Cascades in the Magnetosphere of a Very Young Pulsar: A Model for the Positron Production near the Galactic Center,” 1987, *Astrophysical Journal*, **314**, 88-94.
36. Shaffer, D.B., Marscher, A.P., Marcaide, J.M., and Romney, J.D. “Multi-Epoch VLBI Observations of 4C39.25: Superluminal Motion amid Stationary Structure,” 1987, *Astrophysical Journal (Letters)*, **314**, L1-L5.
37. Marscher, A.P., Broderick, J.J., Padrielli, L., Bartel, N., and Romney, J.D. “18-cm VLBI Observations of the Quasar NRAO 140 during and after a Low-Frequency Outburst,” 1987, *Astrophysical Journal*, **319**, 456-464.
38. Marscher, A.P., Shaffer, D.B., Booth, R.S., and Geldzahler, B.J. “Multifrequency VLBI Observations of 4C39.25: A Superluminal Source without a Well-Defined Core,” 1987, *Astrophysical Journal (Letters)*, **319**, L69-L72.
39. Daly, R.A., and Marscher, A.P. “The Gas Dynamics of Compact Relativistic Jets,” 1988, *Astrophysical Journal*, **334**, 539-551.
40. Marscher, A.P. “Contemporaneous X-Ray and VLBI Radio Observations of the Quasar NRAO 140,” 1988, *Astrophysical Journal*, **334**, 552-559.
41. McHardy, I.M., Marscher, A.P., Gear, W.K., Muxlow, T., Lehto, H.J., and Abraham, R.G. “VLBI, MERLIN, and VLA Observations of the Blazar 1156+295,” 1990, *Monthly Notices of the Royal Astronomical Society*, **246**, 305-314.



42. Bloom, S.D., and Marscher, A.P. “Comparison of VLBI Radio Core and X-ray Flux Densities of Extragalactic Radio Sources,” 1991, *Astrophysical Journal*, **366**, 16-21.
43. Marscher, A.P., Zhang, Y.F., Shaffer, D.B., Aller, H.D., and Aller, M.F. “Multifrequency VLA, VLBI, and Single-Dish Observations of the Quasar 4C 39.25,” 1991, *Astrophysical Journal*, **371**, 491-500.
44. Marscher, A.P., Bania, T.M., and Wang, Z. “Detection of Local Interstellar CO Absorption toward BL Lacertae,” 1991, *Astrophysical Journal (Letters)*, **371**, L77-L80.
45. Bania, T.M., Marscher, A.P., and Barvainis, R. “Observations of Local Interstellar CO toward Four Compact Extragalactic Radio Sources,” 1991, *Astronomical Journal*, **101**, 2147-2150.
46. Alberdi, A., Marcaide, J.M., Marscher, A.P., Zhang, Y.F., Elósegui, P., Gómez, J.L., and Shaffer, D.B. “The Parsec-Scale Radio Jet of 4C 39.25,” 1993, *Astrophysical Journal*, **402**, 160–172.
47. Marscher, A.P., Moore, E.M., and Bania, T.M. “Detection of AU-Scale Structure in Molecular Clouds,” 1993, *Astrophysical Journal (Letters)*, **419**, L101–L104.
48. Bloom, S.D., Marscher, A.P., Gear, W.K., Teräsranta, H., Valtaoja, E., Aller, H.D., and Aller, M.F. “Radio, Millimeter-Submillimeter, and Infrared Spectra of Flat-Spectrum Extragalactic Radio Sources,” 1994, *Astronomical Journal*, **108**, 398–404.
49. Zhang, Y.F., Marscher, A.P., Aller, H.D., Aller, M.F., Teräsranta, H., and Valtaoja, E. “Radio and X-Ray Observations of the  $\gamma$ -Ray Bright Quasar PKS 0528+134,” 1994, *Astrophysical Journal*, **432**, 91–102.
50. Marscher, A.P., and Stone, A.L. “Simulations of Variations of Absorption Line Profiles in Clumpy Molecular Clouds,” 1994, *Astrophysical Journal*, **433**, 705–711.
51. Gómez, J.L., Alberdi, A., Marcaide, J.M., Marscher, A.P., and Travis, J.P. “Synchrotron Emission from Bent Shocked Relativistic Jets,” 1994, *Astronomy & Astrophysics*, **292**, 33–44.
52. Edelson, R., ..., Marscher, A.P. (37th author), *et al.* “Multi-Wavelength Monitoring of the BL Lacertae Object PKS 2155–304. IV. Multi-Wavelength Analysis,” 1995, *Astrophysical Journal*, **438**, 120.
53. Gómez, J.L., Martí, J.M., Marscher, A.P., Ibáñez, J.M., and Marcaide, J.M. “Parsec-Scale Synchrotron Emission from Hydrodynamic Relativistic Jets in Active Galactic Nuclei,” 1995, *Astrophysical Journal (Letters)*, **449**, L19–L21 + insert plates L2 and L3.
54. Macomb, D., ..., Marscher, A.P., *et al.* “Multi-Wavelength Observations of Mkn 421 during a TeV/X-Ray Flare,” 1995, *Astrophysical Journal (Letters)*, **449**, L99–L103.
55. Moore, E.M., and Marscher, A.P. “Observational Probes of the Small Scale Structure of Molecular Clouds,” 1995, *Astrophysical Journal*, **452**, 671–679.
56. Marscher, A.P. “Probes of the Inner Jets of Blazars,” 1995, *Proc. Nat. Acad. Sci.*, **92**, 11439–11441.

57. Paglione, T.M., Marscher, A.P., Jackson, J.M., and Bertsch, D.L. “Diffuse Gamma-Ray Emission from the Starburst Galaxy NGC 253,” 1996, *Astrophysical Journal*, **460**, 295–302.
58. Hartman, R.C., Webb, J.R., Marscher, A.P., *et al.* “Simultaneous Multiwavelength Spectrum and Variability of 3C 279 from  $10^9$  to  $10^{24}$  Hz,” 1996, *Astrophysical Journal*, **461**, 698–712.
59. Bloom, S.D., and Marscher, A.P. “An Analysis of the Synchrotron Self-Compton Model for the Multiwaveband Spectra of Blazars,” 1996, *Astrophysical Journal*, **461**, 657–663.
60. Mukherjee, R., ..., Marscher, A.P., *et al.* “Study of the Correlated Multiwavelength Variability of PKS 0528+134,” 1996, *Astrophysical Journal*, **470**, 831–838.
61. Marscher, A.P., and Travis, J.P. “Synchrotron Self-Compton Interpretation of Multiwaveband Observations of Gamma-Ray Bright Blazars,” 1996, *Astr. Ap. Suppl.*, **120**, C537–540.
62. Lister, M.L., and Marscher, A.P. “Statistical Effects of Doppler Beaming and Malmquist Bias on Flux-Limited Samples of Compact Radio Sources,” 1997, *Astrophysical Journal*, **476**, 572–588.
63. Catanese, M., ..., Marscher, A.P., *et al.* “Detection of Gamma Rays with  $E > 100$  MeV from BL Lacertae,” 1997, *Astrophysical Journal*, **480**, 562–567.
64. McGlynn, T.A., Hartman, R.C., Aller, M., Aller, H., Filippenko, A.V., Barth, A.J., Gear, W.K., Marscher, A.P., Mattox, J.R., Reich, W., Robson, E.I., Schramm, J., Stevens, J.A., Teräsranta, H., Tornikoski, M., Vestrand, W.T., Wagner, S., and Heines, A. “A Gamma-Ray Flare in NRAO 190,” 1997, *Astrophysical Journal*, **481**, 625–632.
65. Gómez, J.L., Martí, J.M., Marscher, A.P., Ibáñez, J.M., and Alberdi, A. “Hydrodynamical Models of Superluminal Sources,” 1997, *Astrophysical Journal (Letters)*, **482**, L33–L36 + insert plates L2 and L3.
66. von Montigny, C., ..., Marscher, A.P., *et al.* “Multi-wavelength Observations of 3C 273 in 1993–1995,” 1997, *Astrophysical Journal*, **483**, 161–177.
67. Alberdi, A., Krichbaum, T.P., Graham, D.A., Greve, A., Grewing, M., Marcaide, J.M., Witzel, A., Booth, R.S., Bååth, L.B., Colomer, F., Doleman, S., Marscher, A.P., Rogers, A.E.E., Schalinski, C.J., and Standke, K. “The High-Frequency Compact Radio Structure of the Peculiar Quasar 4C 39.25,” 1997, *Astronomy & Astrophysics*, **327**, 513–521.
68. Wehrle, A.E., Pian, E., Urry, C.M., Maraschi, L., Ghisellini, G., Hartman, R.C., Madejski, G.M., Makino, F., Marscher, A.P., *et al.* “Multiwavelength Observations of a Dramatic High Energy Flare in the Blazar 3C 279,” 1998, *Astrophysical Journal*, **497**, 178–187.
69. Gómez, J.L., Marscher, A.P., Alberdi, A., Martí, J.M., and Ibáñez, J.M. “Subparsec Polarimetric Radio Observations of 3C 120: A Close-Up Look at Superluminal Motion,” 1998, *Astrophysical Journal*, **499**, 221–226.
70. Lister, M.L., Marscher, A.P., and Gear, W.K. “Sub-milliarcsecond Polarimetric Imaging of Blazar Jets at 43 GHz,” 1998, *Astrophysical Journal*, **504**, 702–719.
71. Georganopoulos, M., and Marscher, A.P. “Modeling the Variability of the BL Lacertae Object

- PKS 2155–304,” 1998, *Astrophysical Journal (Letters)*, **506**, L11–L14.
72. Georganopoulos, M., and Marscher, A.P. “A Viewing Angle–Kinetic Luminosity Unification Scheme for BL Lacertae Objects,” 1998, *Astrophysical Journal*, **506**, 621–636.
73. Bloom, S.D., Marscher, A.P., Gear, W.K., Moore, E.M., Teräsranta, H., Valtaoja, E., Aller, H.D., and Aller, M.F. “Multiwaveband Observations of Quasars with Flat Radio Spectra and Strong Millimeter-Wave Emission,” 1999, *Astrophysical Journal Supplement Series*, **122**, 1–27.
74. Gómez, J.L., Marscher, A.P., Alberdi, A., and Gabuzda, D. C. “The Twisted Parsec-Scale Structure of 0735+178,” 1999, *Astrophysical Journal*, **519**, 642–646.
75. Marscher, A.P. “The Compact Jets of TeV Blazars,” 1999, *Astroparticle Physics*, **11**, 19–25.
76. Lister, M.L., and Marscher, A.P. “Predictions of ECS and SSC Models for Flux-Limited Samples of  $\gamma$ -Ray Blazars,” 1999, *Astroparticle Physics*, **11**, 65–67.
77. Gómez, J.L., Marscher, A.P., and Alberdi, A. “86, 43 and 22 GHz VLBI Observations of 3C 120,” 1999, *Astrophysical Journal (Letters)*, **521**, L29–L32.
78. Gómez, J.L., Marscher, A.P., and Alberdi, A. “Outburst in the Polarized Structure of the Compact Jet of 3C 454.3,” 1999, *Astrophysical Journal*, **522**, 74–81.
79. Lawson, A.J., McHardy, I.M., and Marscher, A.P. “*RXTE* Observations of 3C 279 during a High Energy Flare,” 1999, *Monthly Notices of the Royal Astronomical Society*, **306**, 247–252.
80. McHardy, I., Lawson, A., Newsam, A., Marscher, A., Robson, E.I., and Stevens, J. “Simultaneous X-Ray and Infrared Variability in the Quasar 3C273,” 1999, *Monthly Notices of the Royal Astronomical Society*, **310**, 571–576.
81. Gómez, J.L., and Marscher, A.P. “Space VLBI Observations of 3C 371,” 2000, *Astrophysical Journal*, **530**, 245–250.
82. Yurchenko, A.V., Marchenko-Jorstad, S.G., and Marscher, A.P. “Parsec-Scale Jet Behavior of NRAO 190 after a Gamma-Ray Outburst in August 1994,” 2000, *Astronomy & Astrophysics*, **358**, 428–432.
83. Pyatunina, T.B., Marchenko, S.G., Marscher, A.P., Aller, M.F., Aller, H.D., Teräsranta, H., and Valtaoja, E. “Radio Variability of the Gamma-Ray Blazar 0202+149,” 2000, *Astronomy & Astrophysics*, **358**, 451–461.
84. Denn, G.R., Mutel, R.L., and Marscher, A.P. “Very Long Baseline Polarimetry of BL Lac,” 2000, *Astrophysical Journal Supplement Series*, **129**, 61–92.
85. Gómez, J.L., Marscher, A.P., Alberdi, A., Jorstad, S.G., and García-Miró, C. “Flashing Superluminal Components in the Jet of the Radio Galaxy 3C120,” 2000, *Science*, **289**, 2317–2320.
86. Alberdi, A., Gómez, J.L., Marcaide, J.M., Marscher, A.P., and Pérez-Torres, M.A. “4C 39.25: Witnessing the Interaction between a Moving and a Stationary Component,” 2000, *Astronomy & Astrophysics*, **361**, 529–534.

87. Pursimo, T., ..., Marscher, A., *et al.* “Intensive Monitoring of OJ 287,” 2000, *Astronomy & Astrophysics*, **146**, 141–155.
88. Agudo, I., Gómez, J.L., Martí, J.M., Ibáñez, J.M., Marscher, A.P., Alberdi, A., and Hardee, P.E. “Jet Stability and the Generation of Superluminal and Stationary Components,” 2001, *Astrophysical Journal (Letters)*, **549**, L183–L186.
89. Wehrle, A.E., Piner, B.G., Unwin, S.C., Zook, A.C., Xu, W., and Marscher, A.P. “Kinematics of the Parsec-Scale Relativistic Jet in Quasar 3C 279: 1991 – 1997,” 2001, *Astrophysical Journal Supplement Series*, **133**, 297–320.
90. Mattox, J.R., Hallum, J.C., Marscher, A.P., Jorstad, S.G., Waltman, E.B., Teräsranta, H., Aller, H.D., and Aller, M.F. “A Gamma-Ray Flare of Quasar CTA 26,” 2001, *Astrophysical Journal*, **549**, 906–914.
91. Jorstad, S.G., Marscher, A.P., Mattox, J.R., Wehrle, A.E., Bloom, S.D., and Yurchenko, A.V. “Multi-Epoch Very Long Baseline Array Observations of EGRET-Detected Quasars and BL Lacertae Objects: Superluminal Motion of Gamma-Ray Bright Blazars,” 2001, *Astrophysical Journal Supplement Series*, **134**, 181–240.
92. Hartman, R.C., ..., Marscher, A.P., *et al.* “Multi-Epoch Multiwavelength Spectra and Models for Blazar 3C 279,” 2001, *Astrophysical Journal*, **553**, 683–694.
93. Jorstad, S.G., Marscher, A.P., Mattox, J.R., Aller, M.F., Aller, H.D., Wehrle, A.E., and Bloom, S.D. “Multi-Epoch Very Long Baseline Array Observations of EGRET-Detected Quasars and BL Lacertae Objects: Connection between Superluminal Ejections and Gamma-Ray Flares in Blazars,” 2001, *Astrophysical Journal*, **556**, 738–748.
94. Hartman, R.C., ..., Marscher, A.P., *et al.* “Day-Scale Variability of 3C 279 and Searches for Correlations in Gamma-Ray, X-Ray, and Optical Bands,” 2001, *Astrophysical Journal*, **558**, 583–589.
95. Gómez, J.L., Marscher, A.P., Alberdi, A., Jorstad, S.G., and Agudo, I. “Monthly 43 GHz VLBA Polarimetric Monitoring of 3C 120 over 16 Epochs: Evidence for Trailing Shocks in a Relativistic Jet,” 2001, *Astrophysical Journal (Letters)*, **561**, L161–164.
96. Gómez, J.L., Guirado, J.C., Agudo, I., Marscher, A.P., Alberdi, A., Marcaide, J.M., and Gabuzda, D.C. “Changes in the Trajectory of the Radio Jet in 0735+178?” 2001, *Monthly Notices of the Royal Astronomical Society*, **328**, 873–881.
97. Marscher, A.P., Jorstad, S.G., Gómez, J.L., Aller, M.F., Teräsranta, H., Lister, M.L., and Stirling, A.M. “Observational Evidence for the Accretion-Disk Origin for a Radio Jet in an Active Galaxy,” 2002, *Nature*, **417**, 625–627.
98. Marscher, A.P., Jorstad, S.G., Mattox, J.R., and Wehrle, A.E. “High-Frequency VLBA Total and Polarized Intensity Images of Gamma-Ray Bright Blazars,” 2002, *Astrophysical Journal*, **577**, 85–97.
99. Savolainen, T., Wiik, K., Valtaoja, E., Jorstad, S.G., and Marscher, A.P. “Connections between Millimetre Continuum Variations and VLBI Structure in 27 AGN,” 2002, *Astronomy & Astrophysics*, **394**, 851–861.

100. Stirling, A.M., Cawthorne, T.V., Stevens, J.A., Jorstad, S.G., Marscher, A.P., Lister, M.L., Gómez, J.L., Smith, P.S., Agudo, I., Gabuzda, D.C., Robson, E.I., and Gear, W.K. “Discovery of a Precessing Jet Nozzle in BL Lacertae,” 2003, *Monthly Notices of the Royal Astronomical Society*, **341**, 405–422.
101. Böttcher, M., Marscher, A.P., ..., Jorstad, S.G., *et al.* (68 authors). “Coordinated Multiwavelength Observations of BL Lacertae in 2000,” 2003, *Astrophysical Journal*, **596**, 847–859.
102. Giroletti, M., Giovannini, G., Feretti, L., Cotton, W.D., Edwards, P.G., Lara, L., Marscher, A.P., Mattox, J.R., Piner, B.G., and Venturi, T. “Parsec Scale Properties of Markarian 501,” 2004, *Astrophysical Journal*, **600**, 127–140.
103. Krawczynski, H., Hughes, S.B., Horan, D., Aharonian, F. Aller, M.F., Aller, H., Boltwood, P., Buckley, J., Coppi, P., Fossati, G., Götting, N., Holder, J., Horns, D., Kurtanidze, O.M., Marscher, A.P., Nikolashvili, M., Remillard, R.A., Sadun, A., and Schröder, M. “Multiwavelength Observations of Strong Flares from the TeV Blazar 1ES 1959+650,” 2004, *Astrophysical Journal*, **601**, 151–164.
104. Jorstad, S.G., Marscher, A.P., Lister, M. L., Stirling, A. M., Cawthorne, T. V., Gómez, J.L., Gear, W.K. “Change in Speed and Direction of the Jet near the Core in the Quasar 3C 279,” 2004, *Astronomical Journal*, **127**, 3115–3120.
105. Sokolov, A., Marscher, A.P., and McHardy, I.M. “Synchrotron Self-Compton Model for Rapid Nonthermal Flares in Blazars with Frequency-Dependent Time Lags,” 2004, *Astrophysical Journal*, **613**, 725–746.
106. Jorstad, S.J., and Marscher, A.P. “The Highly Relativistic Kiloparsec-Scale Jet of the Gamma-Ray Quasar 0827+243,” 2004, *Astrophysical Journal*, **614**, 615–625.
107. Sokolov, A., and Marscher, A.P. “External Compton Radiation from Rapid Nonthermal Flares in Blazars,” 2005, *Astrophysical Journal*, **629**, 52–60.
108. Jorstad, S.G., Marscher, A.P., Lister, M. L., Stirling, A. M., Cawthorne, T.V., Gear, W.K., Gómez, J.L., Stevens, J.L., Smith, P.S., Forster, J.R., and Robson, E.I. “Polarimetric Observations of 15 Active Galactic Nuclei at High Frequencies: Jet Kinematics from Bimonthly Monitoring with the Very Long Baseline Array,” 2005, *Astronomical Journal*, **130**, 1418–1465.
109. Türler, M., Chernyakova, M., Courvoisier, T.J.-L., Foellmi, C., Aller, M.F., Aller, H.D., Kraus, A., Krichbaum, T.P., Lähteenmäki, A., Marscher, A., McHardy, I.M., O’Brien, P.T., Page, K.L., Popescu, L., Robson, E.I., Tornikoski, M., and Ungerechts, H. “A Historic Jet-Emission Minimum Reveals Hidden Spectral Features in 3C 273,” 2006, *Astronomy & Astrophysics*, **451**, L1–L4.
110. Agudo, I., Gómez, J.L., Gabuzda, D.C., Marscher, A., Jorstad, S.G., and Alberdi, A. “The Milliarcsecond-Scale Jet of PKS 0735+178 during Quiescence,” 2006, *Astronomy & Astrophysics*, **453**, 477–486.
111. Villata, M.,..., Marscher, A.P., et al. “The Unprecedented Optical Outburst of the Quasar 3C 454.3. The 2004–2005 WEBT Campaign,” 2006, *Astronomy & Astrophysics*, **453**, 817–822.
112. Bach, U., Villata, M., Raiteri, C.M., Agudo, I., Aller, H.D., Aller, M.F., Denn, G., Gómez, J.L., Jorstad, S., Marscher, A., Mutel, R.L., and Teräsranta, H. “Structure and Flux Variability in the VLBI Jet of BL Lacertae during the WEBT Campaigns (1995–2004),” 2006, *Astronomy &*

*Astrophysics*, **456**, 105–115.

113. McHardy, I.M., Lawson, A., Newsam, A., Marscher, A., Sokolov, A., Urry, C.M., and Wehrle, A. “Simultaneous X-Ray and Infrared Variability in the Quasar 3C 273. II: Confirmation of the Correlation and X-Ray Lag,” 2007, *Monthly Notices of the Royal Astronomical Society*, **375**, 1521–1527.

114. D’Arcangelo, F.D., Marscher, A.P., Jorstad, S.G., Smith, P.S., Larionov, V.M., Hagen-Thorn, V.A., Kopatskaya, E.N., Williams, G.G., and Gear, W.K. “Rapid Multiwaveband Polarization Variability in the Quasar PKS 0420–014: Optical Emission from the Compact Radio Jet,” 2007, *Astrophysical Journal (Letters)*, **659**, L107–L110.

115. Marscher, A.P., Jorstad, S.G., Gómez, J.L., McHardy, I.M., Krichbaum, T.P., and Agudo, I. “Limit to the Positron Content of the Jet in 3C 120 from INTEGRAL and Millimeter-Wave VLBI Observations,” 2007, *Astrophysical Journal*, **665**, 232–236.

116. Jorstad, S.G., Marscher, A.P., Stevens, J.L., Smith, P.S., Forster, J.R., Gear, W.K., Cawthorne, T.V., Lister, M. L., Stirling, A. M., Gómez, J.L., Greaves, J.S., and Robson, E.I. “Multiwaveband Polarimetric Observations of 15 Active Galactic Nuclei at High Frequencies: Correlated Polarization Behavior,” 2007, *Astronomical Journal*, **134**, 799–824.

117. Agudo, I., Bach, U., Krichbaum, T.P., Marscher, A., Gonidakis, I., Diamond, P. J., Perucho, M., Alef, W., Graham, D.A., Witzel, A., Zensus, J.A., Bremer, M., Acosta-Pulido, J.A., and Barrena, R. “Superluminal Non-ballistic Jet Swing in the Quasar NRAO 150 Revealed by mm-VLBI,” 2007, *Astronomy & Astrophysics*, **476**, L17–L20.

118. Hagen-Thorn, V.A., Larionov, V.M., Jorstad, S.G., Arkharov, A.A., Hagen-Thorn, E.I., Efimova, N.V., Larionova, L.V., and Marscher, A.P. “The Outburst of the Blazar AO 0235+164 in 2006 December: Shock-in-Jet Interpretation,” 2008, *Astrophysical Journal*, **672**, 40–47.

119. Marscher, A.P., Jorstad, S.G., D’Arcangelo, F.D., Smith, P.S., Williams, G.G., Larionov, V.M., Oh, H., Olmstead, A.R., Aller, M.F., Aller, H.D., McHardy, I.M., Lähteenmäki, A., Tornikoski, M., Valtaoja, E., Hagen-Thorn, V.A., Kopatskaya, E.N., Gear, W.K., Tosti, G., Kurtanidze, O., Nikolashvili, M., Sigua, L., Miller, H.R., and Ryle, W.T. “The Inner Jet of an Active Galactic Nucleus as Revealed by a Radio to Gamma-ray Outburst,” 2008, *Nature*, **452**, 966–969.

120. Gómez, J.L, Marscher, A.P., Jorstad, S.G., Agudo, I., and Roca-Sogorb, M. “Faraday Rotation and Polarization Gradients in the Jet of 3C 120: Interaction with the External Medium and a Helical Magnetic Field?” 2008, *Astrophysical Journal (Letters)*, **681**, L69–L72.

121. Raiteri, C.M., ...Jorstad, S.G.,...Marscher, A.P., et al. (61 authors) “The High Activity of 3C 454.3 in Autumn 2007. Monitoring by the WEBT during the AGILE Detection,” 2008, *Astronomy & Astrophysics*, **485**, L17–L20.

122. Chatterjee, R., Jorstad, S.G., Marscher, A.P., Oh, H., McHardy, I.M., Aller, M.F., Aller, H.D., Balonek, T.J., Miller, H.R., Ryle, W.T., Tosti, G., Kurtanidze, O., Nikolashvili, M., Larionov, V.M., and Hagen-Thorn, V.A. “Correlated Multi-waveband Variability in the Blazar 3C 279 from 1996 to 2007,” 2008, *Astrophysical Journal*, **689**, 79–94.

123. Raiteri, C.M., ...Jorstad, S.G.,...Marscher, A.P., et al. (75 authors). “A New Activity Phase of the Blazar 3C 454.3. Multifrequency Observations by the WEBT and XMM-Newton in 2007–2008,”

2008, *Astronomy & Astrophysics*, **491**, 755–766.

124. Larionov, V.M., Jorstad, S.G., Marscher, A.P., et al. “Results of WEBT, VLBA, and RXTE Monitoring of 3C 279 during 2006-07,” 2008, *Astronomy & Astrophysics*, **501**, 389–400.

125. Villata, M.,...,Jorstad, S.G.,...,Marscher, A.P., et al. (56 authors). “The Correlated Optical and Radio Variability of BL Lacertae. WEBT Data Analysis 1994-2005,” 2009, *Astronomy & Astrophysics*, **501**, 455–460.

126. Marshall, K., Ryle, W.T., Miller, H.R., Marscher, A.P., Jorstad, S.G., Chicka, B., and McHardy, I.M. “Multi-wavelength Variability of the Broad Line Radio Galaxy 3C 120,” 2009, *Astrophysical Journal*, **696**, 601–607.

127. Villata, M.,...,Jorstad, S.G.,...,Marscher, A.P., et al. (60 authors). “The GASP-WEBT Monitoring of 3C 454.3 during the 2008 Optical-to-Radio and Gamma-ray Outburst,” 2009, *Astronomy & Astrophysics*, **504**, L9–L12.

128. D’Arcangelo, F.D., Marscher, A.P., Jorstad, S.G., Smith, P.S., Larionov, V.M., Hagen-Thorn, V.A., Williams, G.G., Gear, W.K., Clemens, D.P., Sarcia, D., Grabau, A., Tollestrup, E.V., Buie, M.W., Taylor, B., and Dunham, E. “Synchronous Optical and Radio Polarization Variability in the Blazar OJ287,” 2009, *Astrophysical Journal*, **697**, 985–995.

129. Brenneman, L.W., Weaver, K.A., Kadler, M., Tueller, J., Marscher, A., Ros, E., Zensus, A., Kovalev, Y.Y., Aller, M., Aller, H., Irwin, J., Kerp, J., and Kaufmann, S. “Spectral Analysis of the Accretion Flow in NGC1052 with Suzaku,” 2009, *Astrophysical Journal*, **698**, 528–540.

130. Böttcher, M., Reimer, A., and Marscher, A.P. “Implications of the Very High Energy Gamma-Ray Detection of the Quasar 3C279,” 2009, *Astrophysical Journal*, **703**, 1168–1175.

131. Raiteri, C.M., ...Jorstad, S.G.,...Marscher, A.P., et al. (69 authors). “WEBT Multiwavelength Monitoring and XMM-Newton Observations of BL Lacertae in 2007-2008. Unveiling Different Emission Components,” 2009, *Astronomy & Astrophysics*, **507**, 769–779.

132. Chatterjee, R., Marscher, A.P., Jorstad, S.G., Olmstead, A.R., McHardy, I.M., Aller, M.F., Aller, H.D., Lahteenmaki, A., Tornikoski, M., Hovatta, T., Marshall, K., Miller, H.R., Ryle, W.T., Chicka, B., Benker, A.J., Bottorff, M.C., Brokofsky, D., Campbell, J.S., Chonis, T.S, Gaskell, C.M., Gaynullina, E.R., Grankin, K.N., Hedrick, C.H., Ibrahimov, M.A., Klimek, E.S., Kruse, A.K., Masatoshi, S., Mille, T.R., Pan, H.-J., Petersen, E.A., Peterson, B.W., Shen, Z., Strel’nikov, D.V., Tao, J., Watkins, A.E., and Wheeler, K. “Disk-Jet Connection in the Radio Galaxy 3C 120,” 2009, *Astrophysical Journal*, **704**, 1689–1703.

133. D’Ammando, F., ...Jorstad, S.G.,...Marscher, A.P., et al. (106 authors). “AGILE Detection of a Rapid Gamma-ray Flare from the Blazar PKS 1510-089 during the GASP-WEBT Monitoring,” 2009, *Astronomy & Astrophysics*, **508**, 181–189.

134. Matveenko, L.I., Sivakon’, S.S., Jorstad, S.G., and Marscher, A.P. “Structural Peculiarities of the AGN Object 1803+784 ,” 2010, *Astronomy Letters*, **36**, 151–166.

135. Abdo, A.,...,Jorstad, S.G.,...,Marscher, A.P., et al. “A Change in the Optical Polarization Associated with a Gamma-ray Flare in the Blazar 3C 279,” 2010, *Nature*, **463**, 919–923.

136. Marscher, A.P., Jorstad, S.G., Larionov, V.M., Aller, M.F., Aller, H.D., Lähteenmäki, A., Agudo, I., Smith, P.S., Gurwell, M., Hagen-Thorn, V.A., Konstantinova, T.S., Larionova, E.G., Larionova, L.V., Melnichuk, D.A., Blinov, D.A., Kopatskaya, E.N., Troitsky, I.S., Tornikoski, M., Hovatta, T., Schmidt, G.D., D’Arcangelo, F.D., Bhattarai, D., Taylor, B., Olmstead, A.R., Manne-Nicholas, E., Roca-Sogorb, M., Gómez, J.L., McHardy, I.M., Kurtanidze, O., Nikolashvili, M.G., Kimeridze, G.N., and Sigual, L.A. “Probing the Inner Jet of the Quasar PKS 1510–089 with Multi-waveband Monitoring during Strong Gamma-ray Activity,” 2010, *Astrophysical Journal (Letters)*, **710**, L126–L131.
137. Vercellone, S.,...,Jorstad, S.G.,...,Marscher, A.P., et al. “Multiwavelength Observations of 3C 454.3. III. Eighteen Months of Agile Monitoring of the ‘Crazy Diamond’,” 2010, *Astrophysical Journal*, **712**, 405–420.
138. Roca-Sogorb, M., Gómez, J.L., Agudo, I., Marscher, A.P., and Jorstad, S.G. “Unexpected High Brightness Temperature 140 Parsecs from the Core in the Jet of 3C 120,” 2010, *Astrophysical Journal (Letters)*, **712**, L160–L164.
139. Jorstad, S.G., Marscher, A.P., et al. “Flaring Behavior of the Quasar 3C 454.3 across the Electromagnetic Spectrum,” 2010, *Astrophysical Journal*, **715**, 362–384.
140. Abdo, A.A.,...,Jorstad, S.G.,...,Marscher, A.P., et al. “The Spectral Energy Distribution of Fermi Bright Blazars,” 2010, *Astrophysical Journal*, **716**, 30–70.
141. Raiteri, C.M.,...,Jorstad, S.G.,...,Marscher, A.P., et al. “Another Look at the BL Lacertae Flux and Spectral Variability. Observations by GASP-WEBT, XMM-Newton, and Swift in 2008-2009,” 2010, *Astronomy & Astrophysics*, **524**, A43 (12 pages).
142. Abdo, A.A.,...,Jorstad, S.G.,...,Marscher, A.P., et al. “Multi-wavelength Observations of the Flaring Gamma-ray Blazar 3C 66A in 2008 October,” 2011, *Astrophysical Journal*, **726**, 43 (14 pages).
143. Agudo, I., Jorstad, S.G., Marscher, A.P., Larionov, V.M., Gomez, J.L., Lahteenmaki, A., Gurwell, M., Smith, P.S., Wiesemeyer, H., Thum, C., Heidt, J., Blinov, D.A., D’Arcangelo, F.D., Hagen-Thorn, V.A., Morozova, D.A., Nieppola, E., Roca-Sogorb, M., Schmidt, G.D., Taylor, B., Tornikoski, M., and Troitsky, I.S. “Location of Gamma-ray Flare Emission in the Jet of the BL Lacertae Object OJ287 more than 14 pc from the Central Engine,” 2011, *Astrophysical Journal (Letters)*, **726**, L13 (6 pages).
144. Marscher, A.P., and Jorstad, S.G. “The Megaparsec-Scale X-ray Jet of the BL Lac Object OJ287,” 2011, *Astrophysical Journal*, **728**, 26 (8 pages).
145. Abdo, A.A.,...,Marscher, A.P., et al. “The First Fermi Multifrequency Campaign on BL Lacertae: Characterizing the Low-activity State of the Eponymous Blazar,” 2011, *Astrophysical Journal*, **730**, 77 (14 pages).
146. D’Ammando, F.,...,Jorstad, S.G.,...,Marscher, A.P., et al. “AGILE detection of extreme Gamma-ray activity from the blazar PKS 1510-089 during March 2009. Multifrequency analysis,” 2011, *Astronomy & Astrophysics*, **529**, A145 (12 pages).
147. Malmrose, M.P., Marscher, A.P., Jorstad, S.G., Nikutta, R., and Elitzur, M. “Emission from Hot Dust in the Infrared Spectra of Gamma-ray Bright Blazars,” 2011, *Astrophysical Journal*, **732**, 116 (8



pages).

148. Gómez, J.L., Roca-Sogorb, M., Agudo, I., Marscher, A.P., and Jorstad, S.G. “On the Source of Faraday Rotation in the Jet of the Radio Galaxy 3C 120,” 2011, *Astrophysical Journal*, **733**, 11 (12 pages).
149. Chatterjee, R., Marscher, A.P., Jorstad, S.G., et al. “Connection Between the Accretion Disk and Jet in the Radio Galaxy 3C 111,” 2011, *Astrophysical Journal*, **734**, 43 (16 pages).
150. Marscher, A.P., Jorstad, S.G., Larionov, V.M., Aller, M.F., and Lähteenmäki, A., “Multi-Waveband Emission Maps of Blazars,” 2011, *Journal of Astrophysics and Astronomy*, **32**, 233–237.
151. Jorstad, S.G., Marscher, A.P., Agudo, I., Smith, P.S., Larionov, V.M., and Lähteenmäki, A., “Multi-Frequency Observations of Gamma-Ray Blazar 1633+382,” 2011, *Journal of Astrophysics and Astronomy*, **32**, 239–242.
152. Palma, N.I.,...,Jorstad, S.G.,...,Marscher, A.P., et al. “Multiwavelength Observations of the Gamma-Ray Blazar PKS 0528+134 in Quiescence,” 2011, *Astrophysical Journal*, **735**, 60 (18 pages).
153. Agudo, I., Marscher, A.P., Jorstad, S.G., et al. “On the Location of the Gamma-Ray Outburst Emission in the BL Lacertae Object AO 0235+164 Through Observations Across the Electromagnetic Spectrum,” 2011, *Astrophysical Journal (Letters)*, **735**, L10 (7 pages).
154. Schinzel, F.K.,...,Jorstad, S.G.,...,Marscher, A.P., et al. “Identification of Gamma-ray Emission from 3C 345 and NRAO 512,” 2011, *Astronomy & Astrophysics*, **532**, A150 (XX pages).
155. Raiteri, C.M.,...,Jorstad, S.G.,...,Marscher, A.P., et al., “The Long-lasting Activity of 3C 454.3. GASP-WEBT and Satellite Observations in 2008-2010,” 2011, *Astronomy & Astrophysics*, **534**, A87 (16 pages).
156. Schinzel, F.K., Lobanov, A.P., Taylor, G.B., Jorstad, S.G., Marscher, A.P., and Zensus, J.A. “Relativistic Outflow Drives Gamma-Ray Emission in 3C345,” 2012, *Astronomy & Astrophysics*, **537**, A70, 9 pages.
157. Agudo, I., Marscher, A.P., Jorstad, S.G., Gómez, J.L., Perucho, M., Piner, B.G., Rioja, M, and Dodson, R. “Erratic Jet Wobbling in the BL Lacertae Object OJ287 Revealed by Sixteen Years of 7 mm VLBA Observations,” 2012, *Astrophysical Journal*, **747**, 63 (10 pages).
158. Marti-Vidal, I., Krichbaum, T.P., Marscher, A., Alef, W., Bertarini, A., Bach, U., Schinzel, F.K., Rottmann, H., Anderson, J.M., Zensus, J.A., Bremer, M., Sanchez, S., Lindqvist, M., and Mujunen, A. “On the Calibration of Full-polarization 86GHz Global VLBI Observations,” 2012, *Astronomy & Astrophysics*, **542**, A107 (10 pages).
159. Tombesi, F., Sambruna, R.M., Marscher, A.P., Jorstad, S.G., Reynolds, C.S., and Markowitz, A. “Comparison of ejection events in the jet and accretion disc outflows in 3C 111,” 2012, *Monthly Notices of the Royal Astronomical Society*, **424**, 754-761.
160. Hayashida, M., ..., Agudo, I., ..., Blumenthal, K., ... , Jorstad, S.G., Joshi, M., ..., Marscher, A.P., et al. “The Structure and Emission Model of the Relativistic Jet in the Quasar 3C 279 Inferred

- from Radio to High-energy Gamma-ray Observations in 2008-2010,” 2012, *Astrophysical Journal*, **754**, 114 (22 pages).
161. Raiteri, C.M.,...,Jorstad, S.G.,...,Marscher, A.P., et al., “Variability of the Blazar 4C 38.41 (B3 1633+382) from GHz Frequencies to GeV Energies,” 2012, *Astronomy & Astrophysics*, **545**, A48 (18 pages).
162. Lico, R.,...,Jorstad, S.G., Marscher, A.P., et al., “VLBA Monitoring of Mrk 421 at 15 GHz and 24 GHz during 2011,” 2012, *Astronomy & Astrophysics*, **545**, A117 (8 pages).
163. Wehrle, A.E., Marscher, A.P., Jorstad, S.G., Gurwell, M.A., Joshi, M., MacDonald, N.R., Williamson, K.E., Agudo, I., and Grupe, D. “Multiwavelength Variations of 3C 454.3 during the 2010 November to 2011 January Outburst,” 2012, *Astrophysical Journal*, **758**, 72 (21 pages).
164. Arlen, T.,...,Jorstad, S.G.,...,Marscher, A.P., et al., “Rapid TeV Gamma-Ray Flaring of BL Lacertae,” 2013, *Astrophysical Journal*, **762**, 92 (13 pages).
165. Larionov, V.M., Jorstad, S.G., Marscher, A.P., Morozova, D.A., Blinov, D.A., Hagen-Thorn, V.A., Konstantinova, T.S., Kopatskaya, E.N., Larionova, L.V., Larionova, E.G., and Troitsky, I.S., “The Outburst of the Blazar S5 0716+71 in 2011 October: Shock in a Helical Jet,” 2013, *Astrophysical Journal*, **768**, 40 (9 pages).
166. Lu, R.-S., ...,Jorstad, S.G., ...,Marscher, A.P., et al., “Fine-scale Structure of the Quasar 3C 279 Measured with 1.3 mm Very Long Baseline Interferometry,” 2013, *Astrophysical Journal*, **772**, 13 (10 pages).
167. Cawthorne, T.V., Jorstad, S.G., and Marscher, A.P., “Polarization Structure in the Core of 1803+784: A Signature of Recollimation Shocks?” 2013, *Astrophysical Journal*, **772**, 14 (10 pages).
168. Lohfink, A.M., Reynolds, C.S., Jorstad, S.G., Marscher, A.P., Miller, E.D., Aller, H., Aller, M.F., Brenneman, L.W., Fabian, A.C., Miller, J.M., Mushotzky, R.F., Nowak, M.A., and Tombesi, F. “An X-Ray View of the Jet-Cycle in the Radio Loud AGN 3C120,” 2013, *Astrophysical Journal*, **772**, 83 (13 pages).
169. Jorstad, S.G., Marscher, A.P., Smith, P.S., Larionov, V.M., Agudo, I., Gurwell, M., Wehrle, A.E., Lähteenmäki, A., Nikolashvili, M.G., Schmidt, G.D., Arkharov, A.A., Blinov, D.A., Blumenthal, K., Casadio, C., Chigladze, R.A., Efimova, N.V., Eggen, J.R., Gómez, J.L., Grupe, D., Hagen-Thorn, V.A., Joshi, M., Kimeridze, G.N., Konstantinova, T.S., Kopatskaya, E.N., Kurtanidze, O.M., Kurtanidze, S.O., Larionova, E.G., Larionova, L.V., Lorand, S.A., MacDonald, N.R., Maune, J.D., McHardy, I.M., Miller, H.R., Molina, S.N., Morozova, D.A., Scott, T., Taylor, B., Tornikoski, M., Troitsky, I.S., Thum, C., Walker, G., Williamson, K.E., Sallum, S., Consiglio, S., and Strelitski, V., “A Tight Connection between Gamma-Ray Outbursts and Parsec-Scale Jet Activity in the Quasar 3C 454.3,” 2013, *Astrophysical Journal*, **773**, 147 (27 pages).
170. Blasi, M.G., Lico, R., Giroletti, M., Orienti, M., Giovannini, G., Cotton, W., Edwards, P.G., Fuhrmann, L., Krichbaum, T.P., Kovalev, Y.Y., Jorstad, S., Marscher, A., Kino, M., Paneque, D., Perez-Torres, M.A., Piner, B.G., and Sokolovsky, K.V. “The TeV Blazar Markarian 421 at the Highest Spatial Resolution,” 2013, *Astronomy & Astrophysics*, **559**, A75 (11 pages).
171. Raiteri, C., ..., Agudo, I., ..., Jorstad, S.G., Joshi, M., ..., Marscher, A.P., ..., Taylor, B., et al. “The Awakening of BL Lacertae: Observations by Fermi, Swift and the GASP-WEBT,” 2013,

*Monthly Notices of the Royal Astronomical Society*, **436**, 1530–1545.

172. Marscher, A.P., “Extreme Multi-Zone Model for Simulating Flux and Polarization Variability in Blazars,” 2014, *Astrophysical Journal*, **780**, 87 (10 pages).

173. Joshi, M., Marscher, A.P., and Böttcher, M. “Seed Photon Fields of Blazars in the Internal Shock Scenario,” 2014, *Astrophysical Journal*, **785**, 132 (18 pages).

174. Williamson, K.E., Jorstad, S.G., Marscher, A.P., et al. “Comprehensive Monitoring of Gamma-ray Bright Blazars. I. Statistical Study of Optical, X-ray, and Gamma-ray Spectral Slopes,” 2014 *Astrophysical Journal*, **789**, 135 (20 pages).

175. Morozova, D.A., Larionov, V.M., Troitsky, I.S., Jorstad, S.G., Marscher, A.P., Gómez, J.L., Blinov, D.A., Efimova, N.V., Hagen-Thorn, V.A., Hagen-Thorn, E.I., Joshi, M., Konstantinova, T.S., Kopatskaya, E.N., Larionova, L.V., Larionova, E.G., Lähteenmäki, A., Tammi, J., Rastorgueva-Foi, E., McHardy, I., Tornikoski, M., Agudo, I., Casadio, C., Molina, S.N., Volvach, A.E., and Volvach, L.N. “The Outburst of the Blazar S4 0954+658 in 2011 March-April,” 2014, *Astronomical Journal*, **148**, 42 (9 pages).

176. Ramakrishnan, V., León-Tavares, J., Rastorgueva-Foi, E.A., Wiik, K., Jorstad, S.G., Marscher, A.P., et al. “The Connection between the Parsec-scale Radio Jet and Gamma-ray Flares in the Blazar 1156+295,” 2014, *Monthly Notices of the Royal Astronomical Society*, **445**, 1636–1646.

177. Aleksic, J., ..., Jorstad, S., Marscher, A., et al. “MAGIC Gamma-ray and Multifrequency Observations of Flat Spectrum Radio Quasar PKS 1510-089 in Early 2012,” 2014, *Astronomy & Astrophysics*, **569**, A46 (21 pages).

178. Lico, R., Giroletti, M., Orienti, M., Giovannini, G., Gomez, J.L., Casadio, C., D’Ammando, F., Blasi, M.G., Cotton, W., Edwards, P.G., Fuhrmann, L., Jorstad, S., Kino, M., Kovalev, Y.Y., Krichbaum, T.P., Marscher, A.P., Paneque, D., Piner, G., and Sokolovsky, K. “Very Long Baseline Polarimetry and the Gamma-ray Connection in Markarian 421 during the Broadband Campaign in 2011,” 2014, *Astronomy & Astrophysics*, **571**, A54 (13 pages).

179. Rani, B., Krichbaum, T.P., Marscher, A.P., Jorstad, S.G., Hodgson, J.A., Fuhrmann, L., and Zensus, J.A. “Jet Outflow and Gamma-ray Emission Correlations in S5 0716+714,” 2014, *Astronomy & Astrophysics*, **571**, L2 (5 pages).

180. Plambeck, R.L., Bower, G.C., Rao, R., Marrone, D.P., Jorstad, S.G., Marscher, A.P., Doeleman, S.S., Fish, V.L., and Johnson, M.D. “Probing the Parsec-Scale Accretion Flow of 3C 84 with Millimeter Polarimetry,” 2014, *Astrophysical Journal*, **797**, 66 (6 pages).

181. Aleksic, J., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Unprecedented Study of the Broadband Emission of Mrk 421 during Flaring Activity in March 2010,” 2015, *Astronomy & Astrophysics*, **578**, A22 (29 pages).

182. Rani, B., Krichbaum, T.P., Marscher, A.P., Hodgson, J.A., Fuhrmann, L., Angelakis, E., Britzen, S., and Zensus, J.A. “Connection between inner jet kinematics and broadband flux variability in the BL Lac object S5 0716+714,” 2015, *Astronomy & Astrophysics*, **578**, A123 (12 pages).

183. MacDonald, N.R., Marscher, A.P., Jorstad, S.G., and Joshi, M. “Through the Ring of Fire: Gamma-Ray Variability in Blazars by a Moving Plasmoid Passing a Local Source of Seed Photons,”

2015, *Astrophysical Journal*, **804**, 111 (11 pages).

184. Carnerero, M.I., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Multiwavelength behaviour of the blazar OJ 248 from radio to gamma-rays,” 2015, *Monthly Notices of the Royal Astronomical Society*, **450**, 2677–2691.

185. Casadio, C., Gómez, J.L., Grandi, P., Jorstad, S.G., Marscher, A.P., Lister, M.L., Kovalev, Y.Y., Savolainen, T., and Pushkarev, A.B. “The connection between the radio jet and the gamma-ray emission in the radio galaxy 3C 120,” 2015, *Astrophysical Journal*, **808**, 162 (11 pages).

186. Wagner, J., Krichbaum, T.P., Alef, W., ..., Marscher, A.P., et al. “First 230 GHz VLBI Fringes on 3C 279 using the APEX Telescope,” 2015, *Astronomy & Astrophysics*, **581**, A32 (5 pages).

187. Bhatta, G., ..., Jorstad, S., ..., Marscher, A.P., et al. “Discovery of a Highly Polarized Optical Microflare in Blazar S5 0716+714 during the 2014 WEBT Campaign,” 2015, *Astrophysical Journal*, **809**, L27 (6 pages).

188. Casadio, C., Gómez, J.L., Jorstad, S.G., Marscher, A.P., et al. “A Multi-wavelength Polarimetric Study of the Blazar CTA102 during a Gamma-ray Flare in 2012,” 2015, *Astrophysical Journal*, **813**, 51 (14 pages).

189. Wehrle, A.E., Grupe, D., Jorstad, S.G., Marscher, A.P., Gurwell, M., Balokovi, M., Hovatta, T., Madejski, G.M., Harrison, F.H., and Stern, D. “Erratic Flaring of BL Lac in 2012-2013: Multiwavelength Observations,” 2016, *Astrophysical Journal*, **816**, 53 (26 pages).

190. Gómez, J.L., Lobanov, A.P., Bruni, G., Kovalev, Y.Y., Marscher, A.P., Jorstad, S.G., Mizuno, Y., Bach, U., Sokolovsky, K.V., Anderson, J.M., Galindo, P., Kardashev, N.S., and Lisakov, M.M. “Probing the innermost regions of AGN jets and their magnetic fields with RadioAstron. I. Imaging BL Lacertae at 21 microarcsecond resolution,” 2016, *Astrophysical Journal*, **817**, 96 (14 pages).

191. Balokavić, M., ..., Jorstad, S., ..., Marscher, A.P., et al. “Multiwavelength Study of Quiescent States of Mrk 421 with Unprecedented Hard X-Ray Coverage Provided by NuSTAR in 2013,” 2016, *Astrophysical Journal*, **819**, 156 (30 pages).

192. Kiehlmann, S., Savolainen, T., Jorstad, S.G., Sokolovsky, K.V., Schinzel, F.K., Marscher, A.P., Larionov, V.M., Agudo, I., et al. “Polarization Angle Swings in Blazars: The Case of 3C 279,” 2016, *Astronomy & Astrophysics*, **590**, A10 (20 pages).

193. Larionov, V.M., Villata, M., Raiteri, C.M., Jorstad, S.G., Marscher, A.P., Agudo, I., et al. “Exceptional Outburst of the Blazar CTA 102 in 2012: The GASP-WEBT Campaign and its Extension,” 2016, *Monthly Notices of the Royal Astronomical Society*, **461**, 3047–3056.

194. Bhatta, G., Stawarz, L., Ostrowski, M., ..., Jorstad, S., ..., Marscher, A.P., et al. “Multifrequency Photo-polarimetric WEBT Observation Campaign on the Blazar S5 0716+714: Source Microvariability and Search for Characteristic Timescales,” 2016, *Astrophysical Journal*, **831**, 92 (17 pages).

195. Morozova, D., Larionov, V., Jorstad, S., Marscher, A., Troitskaya, Y., Troitskiy, I., Blinov, D., Borman, G., and Gurwell, M. “Optical Outburst of the Blazar S4 0954+658 in Early 2015,” 2016, *Galaxies*, **4**, 24 (5 pages).

196. Rani, B., Krichbaum, T., Hodgson, J., Koyama, S., Zensus, A., Fuhrmann, L., Marscher, A., and Jorstad, S., “Exploring the Magnetic Field Configuration in BL Lac Using GMVA” 2016, *Galaxies*, **4**, 32 (6 pages).
197. Casadio, C., Gómez, J., Jorstad, S., Marscher, A., et al., “The Connection between the Radio Jet and the  $\gamma$ -ray Emission in the Radio Galaxy 3C 120 and the Blazar CTA 102” 2016, *Galaxies*, **4**, 34 (5 pages).
198. Marscher, A.P., “Variability of Blazars and Blazar Models over 38 Years” 2016, *Galaxies*, **4**, 37 (12 pages).
199. Larionov, V.M., Jorstad, S.G., Marscher, A.P., and Smith, P.S., “Polarization Vector Rotations: Real, Spurious, Hidden and Imaginary” 2016, *Galaxies*, **4**, 43 (8 pages).
200. Joshi, M., Marscher, A., and Böttcher, M. “Theoretical Study of the Effects of Magnetic Field Geometry on the High-Energy Emission of Blazars” 2016, *Galaxies*, **4**, 45 (9 pages).
201. Jorstad, S., and Marscher, A. “The VLBA-BU-BLAZAR Multi-Wavelength Monitoring Program” 2016, *Galaxies*, **4**, 47 (10 pages).
202. Williamson, K.E., Jorstad, S.G., Marscher, A.P., Larionov, V.M., Agudo, I., Arkhanov, A.A., Blinov, D.A., Casadio C., Gómez, J.L., Hagen-Thorn, V.A., Joshi, M., Konstantinova, S., Kopatskaya, E.N., Larionova, E.G., Larionova, L.V., Malmrose, M.P., McHardy, I.M., Molina, S.N., Morozova, D.A., Schidt, G.D., Taylor, B.W. and Troitsky, I.S. “Correlation Analysis of Delays between Variations of Gamma-Ray and Optical Light Curves of Blazars,” 2016, *Galaxies*, **4**, 64 (6 pages).
203. Troitskiy, I., Morozova, D., Jorstad, S., Larionov, V., Marscher, A., Agudo, I., Blinov, D., Smith, P., and Troitskaya, Yu. “Multi-Frequency Monitoring of the Flat Spectrum Radio Quasar PKS 1222+216 in 2008-2015” 2016, *Galaxies*, **4**, 72 (7 pages).
204. Hodgson, J.A., Krichbaum, T.P., Marscher, A.P., Jorstad, S.G., et al. “Location of Gamma-ray Emission and Magnetic Field Strengths in OJ 287,” 2017, *Astronomy & Astrophysics*, **597**, A80 (29 pages).
205. Ahnen, M.L., ..., Jorstad, S.G., Marscher, A.P., et al. “Multiwavelength observations of a VHE gamma-ray flare from PKS 1510-089 in 2015,” 2017, *Astronomy & Astrophysics*, **603**, A29 (12 pages).
206. Bruni, G., Gómez, J.L., Casadio, C., Lobanov, A., Kovalev, Y.Y., Sokolovsky, K.V., Lisakov, M.M., Bach, U., Marscher, A., Jorstad, S., Anderson, J.M., Krichbaum, T.P., Savolainen, T., Vega-García, L., Fuentes, A., Zensus, J.A., Alberdi, A., Lee, S.-S., Lu, R.-S., Pérez-Torres, M., and Ros, E. “Probing the innermost regions of AGN jets and their magnetic fields with RadioAstron. II. Observations of 3C 273 at minimum activity,” 2017, *Astronomy & Astrophysics*, **604**, A11 (9 pages).
207. Jorstad, S.G., Marscher, A.P., Morozova, D.A., Troitsky, I.S., Agudo, I., Casadio, C., Foord, A., Gómez, J.J., MacDonald, N.R., Molina, S.N., Lähteenmäki, A., Tammi, J., and Tornikoski, M. “Kinematics of Parsec-scale Jets of Gamma-Ray Blazars at 43 GHz within the VLBA-BU-BLAZAR Program,” 2017, *Astrophysical Journal*, **846**, 98 (35 pages).
208. Harris, D., Lee, N., Schwartz, D., Siemiginowska, A., Massaro, F., Birkinshaw, M., Worrall, D., Cheung, T., Gelbord, J., Jorstad, S., Marscher, A., Landt, H., Marshall, H., Perlman, E., Stawarz, L.,

- Uchiyama, Y., Urry, C.M. “A Multi-band Study of the remarkable Jet in Quasar 4C+19.44,” 2017, *Astrophysical Journal*, **846**, 119 (18 pages).
209. Marscher, A.P., Jorstad, S.G., and Williamson, K.E. “Modeling the Time-Dependent Polarization of Blazars,” 2017, *Galaxies*, **5**, 63 (9 pages).
210. Casadio, C., Krichbaum, T., Marscher, A.P., Jorstad, S.G., Gómez, J.L., Agudo, I., Bach, U., Kim, J.-Y., Hodgson, J. A., and Zensus, A.J. “3 mm GMVA Observations of Total and Polarized Emission from Blazar and Radio Galaxy Core Regions,” 2017, *Galaxies*, **5**, 67 (8 pages).
211. Carnerero, M.I., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Dissecting the long-term emission behaviour of the BL Lac object Mrk 421,” 2017, *Monthly Notices of the Royal Astronomical Society*, **472**, 3789–3804.
212. MacDonald, N.R., Jorstad, S.G., and Marscher, A.P. “‘Orphan’ Gamma-ray Flares and Stationary Sheaths of Blazar Jets,” 2017, *Astrophysical Journal*, **850**, 87 (14 pages).
213. Larionov, V.M., Jorstad, S.G., Marscher, A.P., Smith, P.S., Savchenko, S., Morozova, D., Grishina, T., Kopatskaya, E., Larionova, L., Larionova, E., Mokrushina, A., Troitsky, I., Troitskaya, Y., and Borman, G. “Behaviour of the Blazar CTA 102 during Two Giant Outbursts,” 2017, *Galaxies*, **5**, 91 (7 pages).
214. Raiteri, C.M., ..., Jorstad, S.G., Joshi, M., ..., Malmrose, M.P., Marscher, A.P., et al. “Blazar spectral variability as explained by a twisted inhomogeneous jet,” 2017, *Nature*, **552**, 374–377.
215. Abeysekara, A.U., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Multiwavelength observations of the blazar BL Lacertae: a new fast TeV gamma-ray flare,” 2018, *Astrophysical Journal*, **856**, 95 (14 pages).
216. Pittori, C., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The Bright Gamma-ray Flare of 3C 279 in June 2015: AGILE Detection and Multifrequency Follow-up Observations,” 2018, *Astrophysical Journal*, **856**, 99 (9 pages).
217. Rani, B., Jorstad, S.G., Marscher, A.P., et al. “Exploring the Connection between Parsec-scale Jet Activity and Broadband Outbursts in 3C 279,” 2018, *Astrophysical Journal*, **858**, 80 (15 pages).
218. Ahnen, M.L., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The detection of the blazar S4 0954+65 at very-high-energy with the MAGIC telescopes during an exceptionally high optical state,” 2018, *Astronomy & Astrophysics*, **617**, A30 (15 pages).
219. MacDonald, N.R., and Marscher, A.P. “Faraday Conversion in Turbulent Blazar Jets,” 2018, *Astrophysical Journal*, **862**, 58 (15 pages).
220. Goyal, A., ..., Jorstad, S., Marscher, A., et al. “Stochastic Modeling of Multiwavelength Variability of the Classical BL Lac Object OJ 287 on Timescales Ranging from Decades to Hours,” 2018, *Astrophysical Journal*, **863**, 175 (20 pages).
221. Sasada, M., Jorstad, S., Marscher, A., Bala, V., Joshi, M., MacDonald, N.R., Malmrose, M.P., Larionov, V.M., Morozova, D.A., Troitsky, I.S., Agudo, I., Casadio, C., Gómez, J.L., Molina, S.N., and Itoh, R. “Optical Emission and Particle Acceleration in a Quasi-stationary Component in the Jet

of OJ 287,” 2018, *Astrophysical Journal*, **864**, 67 (11 pages).

222. Marscher, A.P., Jorstad, S.G., Williamson, K.E., Lähteenmäki, A., Tornikoski, M., Hunter, J.M., Leidig, K.A., Mobeen, M.Z., Vera, R.J., & Chamani, W. “X-ray, UV, and Radio Timing Observations of the Radio Galaxy 3C 120,” 2018, *ApJ*, **867**, 128 (16 pages).

223. Magic Collaboration: Ahnen, M.L., ..., Jorstad, S., ..., Marscher, A., et al. “Multi-wavelength characterization of the blazar S5 0716+714 during an unprecedented outburst phase,” 2018, *Astronomy & Astrophysics*, **619**, A45 (18 pages).

224. Casadio, C., Marscher, A.P., Jorstad, S.G., Blinov, D.A., MacDonald, N.R., Krichbaum, T.P., Boccardi, B., Traianou, E., Gomez, J.L., Agudo, I., Sohn, B.-W., Bremer, M., Hodgson, J., Kallunki, J., Kim, J.-Y., Williamson, K.E., and Zensus, J.A. “The magnetic field structure in CTA 102 from high resolution mm-VLBI observations during the flaring state in 2016-2017,” 2019, *Astronomy & Astrophysics*, **622**, A128 (14 pages).

225. Kim, J.-Y., Krichbaum, T., Marscher, A.P., Jorstad, S.G., Agudo, I., Thum, C., Hodgson, J.A., MacDonald, N.R., Ros, E., Lu, R.-S., Bremer, M., de Vicente, P., Lindqvist, M., Trippe, S., and Zensus, J.A. “Spatially resolved origin of mm-wave linear polarization in the nuclear region of 3C 84,” 2019, *Astronomy & Astrophysics*, **622**, A196 (18 pages).

226. Magic Collaboration: Acciari, V.A., ..., Jorstad, S., Marscher, A.P., Mobeen, M.Z., et al. “A Fast Very High Energy Gamma-ray Flare from BL Lacertae during a Period of Multiwavelength Activity in June 2015,” 2019, *Astronomy & Astrophysics*, **623**, A175 (14 pages).

227. Weaver, Z.R., Balonek, T.J., Jorstad, S.G., Marscher, A.P., Larionov, V.M., Smith, P.S., Boni, S.J., Borman, G.A., Chapman, K.J., Jenks, L.G., Kopatskaya, E.N., Larionova, E.G., Morozova, D.A., Nikiforova, A.A., Sabyr, A., Savchenko, S.S., Stahlin, R.W., Troitskaya, Y.V., Troitsky, I.S., and Zhang, S. “The June 2016 Optical and Gamma-Ray Outburst and Optical Micro-Variability of the Blazar 3C454.3,” 2019, *Astrophysical Journal*, **875**, 15 (15 pages).

228. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole,” *Astrophysical Journal (Letters)*, **875**, L1 (17 pages).

229. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First M87 Event Horizon Telescope Results. II. Array and Instrumentation,” 2019, *Astrophysical Journal (Letters)*, **875**, L2 (28 pages).

230. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First M87 Event Horizon Telescope Results. III. Data Processing and Calibration,” 2019, *Astrophysical Journal (Letters)*, **875**, L3 (32 pages).

231. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First M87 Event Horizon Telescope Results. IV. Imaging the Central Supermassive Black Hole,” 2019, *Astrophysical Journal (Letters)*, **875**, L4 (52 pages).

232. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First M87 Event Horizon Telescope Results. V. Physical Origin of the Asymmetric Ring,” 2019, *Astrophysical Journal (Letters)*, **875**, L5 (31 pages).

233. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First M87 Event Horizon Telescope Results. VI. The Shadow and Mass of the Central Black Hole,” 2019, *Astrophysical Journal (Letters)*, **875**, L6 (44 pages).
234. Banerjee, B., Joshi, M., Majumdar, P., Williamson, K.E., Jorstad, S.G., and Marscher, A.P. 2019, *Monthly Notices of the Royal Astronomical Society*, **487**, 845–857.
235. Porth, O., ..., The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “The Event Horizon General Relativistic Magnetohydrodynamic Code Comparison Project,” 2019, *Astrophysical Journal Supplement Series*, **243**, 26 (40 pages).
236. Raiteri, C.M., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The beamed jet and quasar core of the distant blazar 4C 71.07,” 2019, *Monthly Notices of the Royal Astronomical Society*, **489**, 1837–1849.
237. D’Ammando, F., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Investigating the multiwavelength behaviour of the flat spectrum radio quasar CTA 102 during 2013-2017,” 2019, *Monthly Notices of the Royal Astronomical Society*, **490**, 5300–5316.
238. Larionov, V. M., Jorstad, S. G., Marscher, A. P., et al. “Multiwavelength behaviour of the blazar 3C 279: decade-long study from  $\gamma$ -ray to radio,” 2020, *Monthly Notices of the Royal Astronomical Society*, **492**, 3829–3848.
239. The MAGIC Collaboration: Acciari, V.A., et al., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Unravelling the complex behavior of Mrk 421 with simultaneous X-ray and VHE observations during an extreme flaring activity in April 2013,” 2020, *Astrophysical Journal Supplement Series*, **248**, 2 (46 pages).
240. Abeysekara, A.U., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The Great Markarian 421 Flare of February 2010: Multiwavelength variability and correlation studies,” 2020, *Astrophysical Journal*, **890**, 97 (41 pages).
241. Roelofs, F., ..., Jorstad, S., ..., Marscher, A.P., et al. “SYMBA: An end-to-end VLBI synthetic data generation pipeline. Simulating Event Horizon Telescope observations of M 87,” 2020, *Astronomy & Astrophysics*, **636**, A5 (19 pages).
242. Kravchenko, E.V., Gómez, J.L., Kovalev, Y.Y., Lobanov, A.P., Savolainen, T., Bruni, G., Fuentes, A., Anderson, J.M., Jorstad, S.G., Marscher, A.P., Tornikoski, M., Lähteenmäki, A., and Lisakov, M.M. “Probing the Innermost Regions of AGN Jets and Their Magnetic Fields with RadioAstron. III. Blazar S5 0716+71 at Microarcsecond Resolution,” 2020, *Astrophysical Journal*, **893**, 68 (16 pages).
243. Marti-Vidal, I., Muller, S., Mus, A., Marscher, A., Agudo, I., and Gómez, J.L. “ALMA full polarization observations of PKS1830–211 during its record-breaking flare of 2019,” 2020, *Astronomy & Astrophysics*, **638**, L13 (5 pages).
244. Kim, J.-Y., Krichbaum, T.P., Broderick, A.E., Wielgus, M., Blackburn, L., Gomez, J.L., Johnson, M.D., Bouman, K.L., Chael, A., Akiyama, K., Jorstad, S., Marscher, A.P., et al. “Event Horizon Telescope imaging of the archetypal blazar 3C 279 at an extreme 20 microarcsecond resolution,” 2020, *Astronomy & Astrophysics*, **640**, A69 (21 pages).



245. Joshi, M., Marscher, A.P., and Bottcher, M. “Impact of Ordered and Disordered Magnetic Fields on Multiwavelength Emission of Blazars ,” 2020, *Astrophysical Journal*, **898**, 1 (11 pages).
246. Weaver, Z.R., Williamson, K.E., Jorstad, S.G., Marscher, A.P., et al. “Multi-Wavelength Variability of BL Lacertae Measured with High Time Resolution,” 2020, *Astrophysical Journal*, **900**, 137 (26 pages).
247. Wielgus, M.,..., Jorstad, S.,..., Marscher, A.P., et al. “Monitoring the Morphology of M87\* in 2009-2017 with the Event Horizon Telescope,” 2020, *Astrophysical Journal*, **901**, 67 (28 pages).
248. Liodakis, Y., Blinov, D., Jorstad, S.G., Arkharov, A.A., Di Paola, A., Efimova, N.V., Grishina, T.S., Kiehlmann, S., Kopatskaya, E.N., Larionov, V.M., Larionova, L.V., Larionova, E.G., Marscher, A.P., Morozova, D.A., Nikiforova, A.A., Pavlidou, V., Traianou, E., Troitskaya, Yu.V., Troitsky, I.S., Uemura, M., and Weaver, Z.R. “Two Flares with One Shock: the Interesting Case of 3C 454.3,” 2020, *Astrophysical Journal*, **902**, 61 (11 pages).
249. Psaltis, D., ..., Jorstad, S., ..., Marscher, A.P., et al. “Gravitational Test beyond the First Post-Newtonian Order with the Shadow of the M87 Black Hole,” 2020, *Physical Review Letters*, **125**, 141104 (10 pages).
250. MAGIC Collaboration: Acciari, V.A., ..., Marscher, A.P., Jorstad, S.G., et al. “Multiwavelength variability and correlation studies of Mrk 421 during historically low X-ray and  $\gamma$ -ray activity in 2015–2016,” 2021, *Monthly Notices of the Royal Astronomical Society*, **504**, 1427-1451.
251. H.E.S.S. Collaboration, Abdalla, H., ..., Jorstad, S.G., Marscher, A.P., ..., and Weaver, Z.R. “Observation of a sudden cessation of a very-high-energy gamma-ray flare in PKS 1510-089 with H.E.S.S. and MAGIC in May 2016,” 2021, *Astronomy & Astrophysics*, **648**, A23 (22 pages).
252. Acciari, V.A., ..., Jorstad, S.G., Marscher, A.P., Weaver, Z.R., et al. “VHE gamma-ray detection of FSRQ QSO B1420+326 and modeling of its enhanced broadband state in 2020,” 2021, *Astronomy & Astrophysics*, **647**, A163 (19 pages).
253. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.) “First M87 Event Horizon Telescope Results. VII. Polarization of the Ring,” 2021, *Astrophysical Journal (Letters)*, **910**, L12 (48 pages).
254. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.) “First M87 Event Horizon Telescope Results. VIII. Magnetic Field Structure near The Event Horizon,” 2021, *Astrophysical Journal (Letters)*, **910**, L13 (43 pages).
255. Goddi, C., ... Jorstad, S.G., ... Marscher, A.P., et al. “Polarimetric Properties of Event Horizon Telescope Targets from ALMA,” 2021, *Astrophysical Journal (Letters)*, **910**, L14 (54 pages).
256. Algaba, J.C., ..., Jorstad, S., ..., Marscher, A.P., et al. “Broadband Multi-wavelength Properties of M87 during the 2017 Event Horizon Telescope Campaign,” 2021, *Astrophysical Journal (Letters)*, **911**, L11 (43 pages).
257. Marscher, A.P., and Jorstad, S.G. “Frequency and Time Dependence of Linear Polarization in Turbulent Jets of Blazars” 2021, *Galaxies*, **9**, 27 (17 pages).

258. Narayan, R., ..., Jorstad, S., ..., Marscher, A.P., et al. “The Polarized Image of a Synchrotron-emitting Ring of Gas Orbiting a Black Hole,” 2021, *Astrophysical Journal*, **912**, 35 (26 pages).
259. Raiteri, C.M., ..., Jorstad, S.G., Marscher, A.P., et al. “The complex variability of blazars: Time-scales and periodicity analysis in S4 0954+65,” 2021, *Monthly Notices of the Royal Astronomical Society*, **504**, 5629-5646.
260. Hodgson, J.A., Rani, B., Oh, J., Marscher, A., Jorstad, S., Mizuno, Y., Park, J., Lee, S.-S., Trippe, S., and Mertens, F. “A detailed kinematic study of 3C 84 and its connection to Gamma-rays,” 2021, *Astrophysical Journal*, **914**, 43, (19 pages).
261. Acciari, V.A., ..., Jorstad, S.G., Marscher, A.P., Weaver, Z.R., et al. “Multiwavelength variability and correlation studies of Mrk 421 during historically low X-ray and gamma-ray activity in 2015-2016,” 2021, *Monthly Notices of the Royal Astronomical Society*, **504**, 1427-1451.
262. Casadio, C., MacDonald, N. R., Boccardi, B., Jorstad, S.G., Marscher, A.P., Krichbaum, T.P., Hodgson, J.A., Kim, J-Y., Traianou, E., Weaver, Z.R., Gómez Garrido, M., González Garca, J., Kallunki, J., Lindqvist, M., Snchez, S., Yang, J., and Zensus, J.A. “The jet collimation profile at high resolution in BL Lacertae,” 2021, *Astronomy & Astrophysics*, **649**, A153 (9 pages).
263. Kocherlakota, P., ..., Jorstad, S., ..., Marscher, A.P., et al. “Constraints on black-hole charges with the 2017 EHT observations of M87\*,” *Physical Review D*, **103**, 104047 (15 pages).
264. Acciari, V.A., ..., Jorstad, S.G., Marscher, A.P., Weaver, Z.R., et al. “Investigation of the correlation patterns and the Compton dominance variability of Mrk 421 in 2017,” 2021, *Astronomy & Astrophysics*, **655**, A89 (36 pages).
265. Janssen, M., ..., Jorstad, S., ..., Marscher, A.P., et al. “Event Horizon Telescope observations of the jet launching and collimation in Centaurus A,” 2021, *Nature Astronomy*, **5**, 1017–1028.
266. Gómez, J.L., ..., Jorstad, S., ..., Marscher, A.P., et al. “Probing the Innermost Regions of AGN Jets and Their Magnetic Fields with RadioAstron. V. Space and Ground Millimeter-VLBI Imaging of OJ 287,” 2022, *Astrophysical Journal*, **924**, 122 (16 pages).
267. Satapathy, K., ..., Jorstad, S., ..., Marscher, A.P., et al. “The Variability of the Black Hole Image in M87 at the Dynamical Timescale,” *Astrophysical Journal*, **925**, 13 (19 pages).
268. Kim, D.-W., Kravchenko, E.V., Kutkin, A.M., Böttcher, M., Gómez, J.L., Gurwell, M., Jorstad, S.G., Lähteenmäki, A., Marscher, A.P., Ramakrishnan, V., Tornikoski, M., Trippe, S., Weaver, Z., and Williamson, K.E. “Radio and  $\gamma$ -ray activity in the jet of the blazar S5 0716+714,” *Astrophysical Journal*, **925**, 64 (21 pages).
269. Hallum, M.K., Jorstad, S.G., Larionov, V.M., Marscher, A.P., Joshi, M., Weaver, Z.R., Williamson, K.E., et al. “Emission Line Variability during a Nonthermal Outburst in the Gamma-Ray Bright Quasar 1156+295,” 2022, *Astrophysical Journal*, **926**, 180 (19 pages).
270. Goyal A., Soida M., Stawarz L., Wiita P.J., Nilsson K., Jorstad S., Marscher A.P., et al. “Multiwavelength variability power spectrum analysis of the blazars 3C 279 and PKS 1510-089 on multiple timescales,” 2022, *Astrophysical Journal*, **927**, 214 (29 pages).

271. Lico, R., Casadio, C., Jorstad, S.G., Gómez, J.L., Marscher, A.P., Traianou, E., Kim, J.Y., Zhao, G.Y., Fuentes, A., Cho, I., Krichbaum, T.P., Hervet, O., O'Brien, S., Boccardi, B., Myserlis, I., Agudo, I., Alberdi, A., Weaver, Z.R., and Zensus, J.A. “New jet feature in the parsec-scale jet of the blazar OJ287 connected to the 2017 teraelectronvolt flaring activity,” 2022, *Astronomy & Astrophysics*, **658**, L10 (5 pages).
272. Weaver, Z.R., Jorstad, S.G., Marscher, A.P., Morozova, D.A., Troitsky, I.S., Agudo, I., Gómez, J.L., Lähteenmäki, A., Tammi, J., and Tornikoski, M. “Kinematics of Parsec-Scale Jets of Gamma-Ray Bright Blazars at 43 GHz during Ten Years of the VLBA-BU-BLAZAR Program,” 2022, *Astrophysical Journal Supplement Series*, **260**, 12 (42 pages).
273. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First Sagittarius A\* Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole in the Center of the Milky Way,” 2022, *Astrophysical Journal (Letters)*, **930**, L12 (21 pages).
274. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First Sagittarius A\* Event Horizon Telescope Results. II. EHT and Multiwavelength Observations, Data Processing, and Calibration,” 2022, *Astrophysical Journal (Letters)*, **930**, L13 (31 pages).
275. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First Sagittarius A\* Event Horizon Telescope Results. III. Imaging of the Galactic Center Supermassive Black Hole,” *Astrophysical Journal (Letters)*, **930**, L14 (64 pages).
276. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First Sagittarius A\* Event Horizon Telescope Results. IV. Variability, Morphology, and Black Hole Mass,” 2022, *Astrophysical Journal (Letters)*, **930**, L15 (52 pages).
277. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First Sagittarius A\* Event Horizon Telescope Results. V. Testing Astrophysical Models of the Galactic Center Black Hole,” 2022, *Astrophysical Journal (Letters)*, **930**, L16 (49 pages).
278. The Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First Sagittarius A\* Event Horizon Telescope Results. VI. Testing the Black Hole Metric,” 2022, *Astrophysical Journal (Letters)*, **930**, L17 (44 pages).
279. Farah, J., et al. (The Event Horizon Collaboration, including Jorstad, S.G. & Marscher, A.P.). “Selective Dynamical Imaging of Interferometric Data,” 2022, *Astrophysical Journal (Letters)*, **930**, L18 (21 pages).
280. Wielgus, M., et al. (The Event Horizon Collaboration, including Jorstad, S.G. & Marscher, A.P.). “Millimeter Light Curves of Sagittarius A\* Observed during the 2017 Event Horizon Telescope Campaign,” 2022, *Astrophysical Journal (Letters)*, **930**, L19 (32 pages).
281. Georgiev, B., et al. (The Event Horizon Collaboration, including Jorstad, S.G. & Marscher, A.P.). “A Universal Power-law Prescription for Variability from Synthetic Images of Black Hole Accretion Flows,” 2022, *Astrophysical Journal (Letters)*, **930**, L20 (32 pages).
282. Broderick, A.E., et al. (The Event Horizon Collaboration, including Jorstad, S.G. & Marscher, A.P.). “Characterizing and Mitigating Intraday Variability: Reconstructing Source Structure in Accreting Black Holes with mm-VLBI,” 2022, *Astrophysical Journal (Letters)*, **930**, L21 (30 pages).

283. Weisskopf, M.C., ..., Marscher, A., et al. “The Imaging X-Ray Polarimetry Explorer (IXPE): Pre-Launch,” 2022, *Journal of Astronomical Telescopes, Instruments, and Systems*, **8**, 026002 (28 pages).
284. Di Gesu, L., Tavecchio, F., Donnarumma, I., Marscher, A., Pesce-Rollins, M., and Landoni, M. “Testing particle acceleration models for BL LAC jets with the Imaging X-ray Polarimetry Explorer,” 2022, *Astronomy & Astrophysics*, **662**, A83 (9 pages).
285. Zhao, G.-Y., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Unravelling the Innermost Jet Structure of OJ 287 with the First GMVA+ALMA Observations,” 2022, *Astrophysical Journal*, **932**, 72 (12 pages).
286. Issaoun, S., Wielgus, M., Jorstad, S., ..., Marscher, A.P., et al. “Resolving the Inner Parsec of the Blazar J1924–2914 with the Event Horizon Telescope,” 2022, *Astrophysical Journal*, **934**, 145 (21 pages).
287. Ehlert, S.R., ..., Marscher, A.P., ..., Jorstad, S.G., et al. “Limits on X-Ray Polarization at the Core of Centaurus A as Observed with the Imaging X-Ray Polarimetry Explorer,” 2022, *Astrophysical Journal*, **935**, 116 (10 pages).
288. Paraschos, G.F., Krichbaum, T.P., Kim, J.-Y., Hodgson, J.A., Oh, J., Ros, E., Zensus, J.A., Marscher, A.P., Jorstad, S.G., Gurwell, M.A., Lhteenmki, A., Tornikoski, M., Kiehlmann, S., and Readhead, A.C.S. “Jet kinematics in the transversely stratified jet of 3C 84 A two-decade overview,” 2022, *Astronomy & Astrophysics*, **665**, A1 (23 pages).
289. Jorstad, S.G., Marscher, A.P., et al. “Rapid Quasi-periodic Oscillations in the Relativistic Jet of BL Lacertae,” 2022, *Nature*, **609**, 265–268.
290. Vink, J., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “X-Ray Polarization Detection of Cassiopeia A with IXPE,” 2022, *Astrophysical Journal*, **938**, 40 (14 pages).
291. Di Gesu, L., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The X-Ray Polarization View of Mrk 421 in an Average Flux State as Observed by the Imaging X-Ray Polarimetry Explorer,” 2022, *Astrophysical Journal (Letters)*, **938**, L7 (12 pages).
292. Marinucci, A., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Polarization Constraints on the X-ray Corona in Seyfert Galaxies: MCG-05-23-16,” 2022, *Monthly Notices of the Royal Astronomical Society*, **516**, 5907–5913.
293. Marshall, H.L., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Observations of 4U 1626-67 with the Imaging X-Ray Polarimetry Explorer,” 2022, *Astrophysical Journal*, **940**, 70 (13 pages).
294. Marinucci, A., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Polarization constraints on the X-ray corona in Seyfert Galaxies: MCG-05-23-16,” 2022, *Monthly Notices of the Royal Astronomical Society*, **516**, 5907–5913.
295. Taverna, R., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Polarized X-rays from a Magnetar,” 2022, *Science*, **378**, 646–650.
296. Krawczynski, H., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Polarized X-rays Constrain the

- Disk-Jet Geometry in the Black Hole X-ray Binary Cygnus X-1,” 2022, *Science*, **378**, 650–654.
297. Liodakis, I., Marscher, A.P., ..., Jorstad, S.G., et al. “Polarized Blazar X-rays Imply Particle Acceleration in Shocks,” 2022, *Nature*, **611**, 677–681.
298. Tsygankov, S.S., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The X-Ray Polarimetry View of the Accreting Pulsar Cen X-3,” 2022, *Astrophysical Journal (Letters)*, **941**, L14 (16 pages).
299. Doroshenko, V., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Determination of X-ray Pulsar Geometry with IXPE Polarimetry,” 2022, *Nature Astronomy*, **6**, 1433–1443.
300. Xie, F., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Vela pulsar wind nebula X-rays are polarized to near the synchrotron limit,” 2022, *Nature*, **612**, 658–660.
301. Marscher, A.P., and Jorstad, S.G. “Linear Polarization Signatures of Particle Acceleration in High-Synchrotron-Peak Blazars,” 2022, *Universe*, **8**, 644 (10 pages).
302. Middei, R., ..., Marscher, A.P., ..., Jorstad, S.G., et al. “X-Ray Polarization Observations of BL Lacertae,” 2023, *Astrophysical Journal (Letters)*, **942**, L10 (14 pages).
303. Rocha, G., Keskitalo, R., Partridge, B., Marscher, A., O’Dea, C., Pearson, T.J., and Górski, K.M. “Polarization and variability of compact sources measured in Planck time-ordered data,” 2023, *Astronomy & Astrophysics*, **669**, A92 (17 pages).
304. Lico, R., Jorstad, S.G., Marscher, A.P., et al. “Multi-Wavelength and Multi-Messenger Studies Using the Next-Generation Event Horizon Telescope,” 2023, *Galaxies*, **11**, 17 (10 pages).
305. Capitanio, F., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Polarization Properties of the Weakly Magnetized Neutron Star X-Ray Binary GS 1826-238 in the High Soft State,” 2023, *Astrophysical Journal*, **943**, 129 (10 pages).
306. Ursini, F., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Mapping the circumnuclear regions of the Circinus galaxy with the Imaging X-ray Polarimetry Explorer,” 2023, *Monthly Notices of the Royal Astronomical Society*, **519**, 50–58.
307. Farinelli, R., ..., Marscher, A.P., ..., Jorstad, S.G., et al. “Accretion geometry of the neutron star low mass X-ray binary Cyg X-2 from X-ray polarization measurements,” 2023, *Monthly Notices of the Royal Astronomical Society*, **519**, 3681–3690.
308. Jorstad, S.G., ..., Marscher, A.P., et al. “The Event Horizon Telescope Image of the Quasar NRAO 530,” *Astrophysical Journal*, **943**, 170 (19 pages).
309. Zane, S., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “A Strong X-Ray Polarization Signal from the Magnetar 1RXS J170849.0-400910,” 2023, *Astrophysical Journal (Letters)*, **944**, L27 (12 pages).
310. Ferrazzoli, R., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “X-Ray Polarimetry Reveals the Magnetic-field Topology on Sub-parsec Scales in Tycho’s Supernova Remnant,” 2023, *Astrophysical Journal (Letters)*, **945**, 52 (14 pages).
311. Negro, M., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The IXPE view of GRB 221009A,” 2023,

*Astrophysical Journal (Letters)*, **946**, L21 (21 pages).

312. Forsblom, S., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “IXPE Observations of the Quintessential Wind-accreting X-Ray Pulsar Vela X-1,” 2023, *Astrophysical Journal (Letters)*, **947**, L20 (10 pages).

313. Lu, R.-S., ..., Marscher, A.P., et al. “A ring-like accretion structure in M87 connecting its black hole and jet,” 2023, *Nature*, **616**, 686-690.

314. Peirson, A.L., ..., Marscher, A.P., ..., Jorstad, S.G. et al. “X-Ray Polarization of BL Lacertae in Outburst,” 2023, *Astrophysical Journal (Letters)*, **948**, L25 (12 pages).

315. Bucciantini, N., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Simultaneous space and phase resolved X-ray polarimetry of the Crab pulsar and nebula,” 2023, *Nature Astronomy*, **7**, 602-610.

316. Raiteri, C.M., Villata, M., Jorstad, S.G., Marscher, A.P., et al. “The optical behaviour of BL Lacertae at its maximum brightness levels: a blend of geometry and energetics,” 2023, *Monthly Notices of the Royal Astronomical Society*, **522**, 102–116.

317. Cocchi, M., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Discovery of strongly variable X-ray polarization in the neutron star low-mass X-ray binary transient XTE J1701–462”, *Astronomy & Astrophysics*, **674**, A10 (7 pages).

318. Zhang, H., Marscher, A.P., Guo, F., Giannios, D., Li, X., and Negro, M. “First-Principle-Integrated Study of Blazar Synchrotron Radiation and Polarization Signatures from Magnetic Turbulence,” 2023, *Astrophysical Journal*, **949**, 71 (16 pages).

319. Prather, B.S., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Comparison of Polarized Radiative Transfer Codes Used by the EHT Collaboration,” 2023, *Astrophysical Journal*, **950**, 35 (23 pages).

320. Malacaria, C., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “A polarimetrically oriented X-ray stare at the accreting pulsar EXO 2030+375,” 2023, *Astronomy & Astrophysics*, **675**, A29 (10 pages).

321. Tsygankov, S., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “X-ray pulsar GRO J1008– 57 as an orthogonal rotator,” 2023, *Astronomy & Astrophysics*, **675**, A48 (11 pages).

322. Di Gesu, L., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Discovery of X-ray polarization angle rotation in the jet from blazar Mrk 421,” 2023, *Nature Astronomy*, **7**, 1245-1258.

323. Gianolli, V.E., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Uncovering the geometry of the hot X-ray corona in the Seyfert galaxy NGC 4151 with IXPE,” 2023, *Monthly Notices of the Royal Astronomical Society*, **523**, 4468–4476.

324. Mushtukov, A.A., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “X-ray polarimetry of X-ray pulsar X Persei: another orthogonal rotator?” 2023, *Monthly Notices of the Royal Astronomical Society*, **524**, 2004–2014.

325. Abe, H., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Multimessenger Characterization of Markarian 501 during Historically Low X-Ray and  $\gamma$ -ray Activity,” 2023, *Astrophysical Journal Supplement Series*, **266**, 37 (43 pages).

326. Acharyya, A., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “VERITAS Discovery of Very High Energy Gamma-Ray Emission from S3 1227+25 and Multiwavelength Observations,” 2023, *Astrophysical Journal*, **950**, 152 (13 pages).
327. Ursini, F., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “X-ray polarimetry and spectroscopy of the neutron star low-mass X-ray binary GX 9+9: An in-depth study with IXPE and NuSTAR,” 2023, *Astronomy & Astrophysics*, **676**, A20 (10 pages).
328. Marin, F., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “X-ray polarization evidence for a 200-year-old flare of Sgr A\*,” 2023, *Nature*, **619**, 41-45.
329. DiMarco, A., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “First Detection of X-Ray Polarization from the Accreting Neutron Star 4U 1820-303,” 2023, *Astrophysical Journal (Letters)*, **953**, L22, (13 pages).
330. Middei, R., ..., Marscher, A.P., ...Jorstad, S.G., et al. “IXPE and Multiwavelength Observations of Blazar PG 1553+113 Reveal an Orphan Optical Polarization Swing,” 2023, *Astrophysical Journal (Letters)*, **953**, L28, (10 pages).
331. Doroshenko, V., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “Complex variations in X-ray polarization in the X-ray pulsar LS V +44 17/RX J0440.9+4431,” 2023, *Astronomy & Astrophysics*, **677**, A57 (10 pages).
332. Turolla, R., ..., Marscher, A.P., ...Jorstad, S.G., et al. “IXPE and XMM-Newton Observations of the Soft Gamma Repeater SGR 1806–20,” 2023, *Astrophysical Journal*, **954**, 88 (9 pages).
333. Tagliacozzo, D., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The geometry of the hot corona in MCG-05-23-16 constrained by X-ray polarimetry,” 2023, *Monthly Notices of the Royal Astronomical Society*, **525**, 4735-4743.
334. Ingram, A., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The X-ray polarization of the Seyfert 1 galaxy IC 4329A,” 2023, *Monthly Notices of the Royal Astronomical Society*, **525**, 5437-5449.
335. Gupta, A., ...Jorstad, S.G.,..., Marscher, A.P., et al. “Quasi-simultaneous Optical Flux and Polarization Variability of the Binary Super Massive Black Hole Blazar OJ 287 from 2015 to 2023: Detection of an Anticorrelation in Flux and Polarization Variability,” 2023, *Astrophysical Journal (Letters)*, **957**, L11 (11 pages).
336. Event Horizon Telescope Collaboration (incl. Jorstad, S.G., and Marscher, A.P.). “First M87 Event Horizon Telescope Results. IX. Detection of Near-horizon Circular Polarization,” 2023, *Astrophysical Journal (Letters)*, **957**, L20 (42 pages).
337. Roelofs, F., ...Jorstad, S.G.,..., Marscher, A.P., et al. “Polarimetric Geometric Modeling for mm-VLBI Observations of Black Holes,” 2023, *Astrophysical Journal (Letters)*, **957**, L21 (29 pages).
338. Romani, R.W., ...Jorstad, S.G.,..., Marscher, A.P., et al. “The Polarized Cosmic Hand: IXPE Observations of PSR B1509-58/MSH 15-5<sup>2</sup>,” 2023, *Astrophysical Journal*, **957**, 23 (9 pages).
339. Zhou, P., ...Jorstad, S.G.,..., Marscher, A.P., et al. “Magnetic Structures and Turbulence in SN 1006 Revealed with Imaging X-Ray Polarimetry,” 2023, *Astrophysical Journal*, **957**, 55 (12 pages).

340. Podgorny, J., ..., Jorstad, S.G., ..., Marscher, A.P., et al. “The first X-ray polarimetric observation of the black hole binary LMC X-1,” 2023, *Monthly Notices of the Royal Astronomical Society*, **526**, 5964-5975.
341. Rodriguez Cavero, N., ...Jorstad, S.G., ..., Marscher, A.P., et al. “The First X-Ray Polarization Observation of the Black Hole X-Ray Binary 4U 1630-47 in the Steep Power-law State,” 2023, *Astrophysical Journal (Letters)*, **958**, L8 (12 pages).
342. Veledina, A., ...Jorstad, S.G., ..., Marscher, A.P., et al. “Discovery of X-Ray Polarization from the Black Hole Transient Swift J1727.8-1613,” 2023, *Astrophysical Journal (Letters)*, **958**, L16 (8 pages).
343. Fuentes, A., ...Jorstad, S.G., ..., Marscher, A.P., et al. “Filamentary structures as the origin of blazar jet radio variability,” 2022, *Nature Astronomy*, **7**, 1359–1367.
344. Torne, P., ..., Marscher, A.P., ...Jorstad, S.G., et al. “A search for pulsars around Sgr A\* in the first Event Horizon Telescope dataset,” 2023, *Astrophysical Journal*, **959**, 14 (27 pages).
345. Ehlert, S.R., ..., Marscher, A.P., ...Jorstad, S.G., et al. “X-Ray Polarization of the BL Lacertae Type Blazar 1ES 0229+200,” 2023, *Astrophysical Journal*, **959**, 61 (11 pages).
- 346 Svoboda, J., ...Jorstad, S.G., ..., Marscher, A.P., et al. “First X-Ray Polarization Measurement Confirms the Low Black Hole Spin in LMC X-3,” 2024, *Astrophysical Journal*, **960**, 3 (12 pages).
347. Mohana A, K., Gupta, A., Marscher, A.P., Sotnikova, Yu.V., Jorstad, S.G., et al. “Multiband Cross-correlated Radio Variability of the Blazar 3C 279,” 2024, *Monthly Notices of the Royal Astronomical Society*, **527**, 6970–6980.



## Conference Papers and Other Miscellaneous Articles

1. Marscher, A.P. “A Theoretical Interpretation of the Radio Outbursts of BL Lac Objects and Other Rapidly Variable Sources,” 1978, in *Pittsburgh Conference on BL Lac Objects*, ed. A.M. Wolfe (Pittsburgh: U. of Pittsburgh Press), 365-374.
2. Christiansen, W.A., Eichler, D., Marscher, A.P., Scott, J.S., and Vestrand, W.T. “Explosive Compact Radio Sources as Possible Sources of High Energy Neutrino Bursts,” 1978, in *Proceedings of the International Conference on Neutrino Physics and Astrophysics (Purdue Meeting)*.
3. Scott, J.S., Marscher, A.P., Vestrand, W.T., and Christiansen, W.A. “Ultra-High Energy Processes in Quasars and Active Nuclei,” 1979, in *Proceedings of the 1978 DUMAND Summer Workshop. Vol. 2: UHE Interactions and Neutrino Astronomy*, ed. A. Roberts (La Jolla: Scripps Inst. of Oceanography), 219-230.
4. Marscher, A.P. “Flat-Spectrum Radio Sources: Victims of a Conspiracy?” 1980, *Nature*, **288**, 12-13 (in “News and Views” section). (Invited commentary)
5. Marscher, A.P., and Broderick, J.J. “Superluminal Motion in NRAO 140 and a Possible Future Method for Constraining  $H_0$  and  $q_0$ ,” 1982, in IAU Symposium 97, *Extragalactic Radio Sources*, ed. D.S. Heeschen and C.M. Wade (Boston: D. Reidel), 359-360.
6. Marscher, A.P. “Relativistic Collision of Relic High-Frequency Radio Components: A Possible Cause of Low-Frequency Variability,” 1982, in *Low Frequency Variability of Extragalactic Radio Sources*, ed. W.D. Cotton and S.R. Spangler (Green Bank, WV: NRAO), 83-87.
7. Marscher, A.P. “Quasars: Bridging the Radio to Infrared Gap,” 1983, *Nature*, **302**, 475-476 (in “News and Views” section). (Invited commentary)
8. Marscher, A.P., Brecher, K., Wheaton, W.A., Ling, J.C., Mahoney, W.A., and Jacobson, A.S. “Are Mildly Active Galaxies Sources of Electron-Positron Annihilation Radiation?” 1983, in *Positron-Electron Pairs in Astrophysics*, ed. by M.L. Burns, A.K. Harding, and R. Ramaty (New York: American Inst. of Physics), 303-308.
9. Marscher, A.P. “Model and Geometry Dependence of Radio Distance Determinations of Extragalactic Supernovae,” 1985, in *Lecture Notes in Physics 224: Supernovae as Distance Indicators*, ed. N. Bartel (New York: Springer-Verlag), 130-137.
10. Marscher, A.P. “Radio Supernovae as Probes for Hubble’s Constant,” 1985, *Nature*, **318**, 18 (in “News and Views” section). (Invited commentary)
11. Marscher, A.P. “On the Connection between High-Frequency Radio and X-Ray Emission in Quasars,” 1986, in *Continuum Emission in Active Galactic Nuclei*, M.L. Sitko, ed. (Tucson: NOAO), 143-149.
12. Marscher, A.P. “Synchro-Compton Emission from Superluminal Sources,” 1987, in *Superluminal Radio Sources*, ed. J.A. Zensus and T.J. Pearson (Cambridge U. Press), 280-299. (Invited review)
13. Shaffer, D.B., and Marscher, A.P. “4C39.25 – Superluminal Motion between Stationary Components,” 1987, in *Superluminal Radio Sources*, ed. J.A. Zensus and T.J. Pearson (Cambridge

U. Press), 67-71.

14. Marscher, A.P. “5 Years of VLBI and X-Ray Observations of NRAO 140,” 1987, in IAU Symposium 129, *The Impact of VLBI on Astrophysics and Geophysics*, ed. M.J. Reid and J.M. Moran (Dordrecht: D. Reidel), 35-36.
15. Shaffer, D.B., and Marscher, A.P. “4C39.25 – Superluminal Motion between Stationary Components,” 1987, in IAU Symposium 129, *The Impact of VLBI on Astrophysics and Geophysics*, ed. M.J. Reid and J.M. Moran (Dordrecht: D. Reidel), 43-44.
16. Bloom, S.D., and Marscher, A.P. “Comparison of VLBI Radio Core and X-ray Flux Densities of Extragalactic Radio Sources,” 1990, in *Imaging X-ray Astronomy: A Decade of Einstein Observatory Achievements*, ed. M. Elvis (Cambridge U. Press), 289-294.
17. Marscher, A.P. “Interpretation of Compact Jet Observations,” 1990, in *Parsec-Scale Radio Jets*, ed. J.A. Zensus and T.J. Pearson (Cambridge U. Press), 236-249. (Invited review)
18. Zhang, Y.F., Marscher, A.P., Shaffer, D.B., Marcaide, J.M., Alberdi, A., and Elósegui, P. “4C 39.25 — A Twisted Compact Jet?” 1990, in *Parsec-Scale Radio Jets*, ed. J.A. Zensus and T.J. Pearson (Cambridge U. Press), 66-70.
19. Marcaide, J.M., Alberdi, A., Elósegui, P., Marscher, A.P., Zhang, Y.F., Shaffer, D.B., Schalinski, C.J., Witzel, A., Jackson, N., and Sandell, G. “Detection of a New Component in the Peculiar Superluminal Quasar 4C 39.25,” 1990, in *Parsec-Scale Radio Jets*, ed. J.A. Zensus and T.J. Pearson (Cambridge U. Press), 59-65.
20. Marscher, A.P., Bania, T.M., and Wang, Z. “Detection of Local CO Absorption toward BL Lac: A Probe of AU-Scale Structure in Molecular Clouds,” 1991, in Proceedings of the Third Haystack Observatory Conference, *Atoms, Ions and Molecules: New Results in Spectral Line Astrophysics*, ed. A.D. Haschick and P.T.P. Ho (San Francisco: Astronomical Society of the Pacific), *Astronomical Society of the Pacific Conference Series*, **16**, 79-82.
21. Marscher, A.P., and Travis, J.P. “Variability of Nonthermal Emission in Compact Jets,” 1991, in *Variability of Active Galactic Nuclei*, ed. H.R. Miller and P.J. Wiita (Cambridge U. Press), 153-157.
22. Marscher, A.P., Gear, W.K., and Travis, J.P. “Variability of Nonthermal Continuum Emission in Blazars,” 1992, in *Variability of Blazars*, ed. E. Valtaoja and M. Valtonen (Cambridge U. Press), 85-101. (Invited review)
23. Marscher, A.P., and Bloom, S.D. “Hard Gamma-Ray Emission from Blazars,” 1992, in *The Compton Observatory Science Workshop*, ed. C.R. Shrader, N. Gehrels, and B. Dennis (NASA Conference Publication 3137), 346-353.
24. Bloom, S.D., and Marscher, A.P. “Expected Level of Self-Compton Scattering in Radio Loud Quasars,” 1992, in *The Compton Observatory Science Workshop*, ed. C.R. Shrader, N. Gehrels, and B. Dennis (NASA Conference Publication 3137), 339-345.
25. Marscher, A.P. “Compact Jets and the AGN Paradigm,” 1992, in AIP Conference Proceedings, **254**, *Testing the AGN Paradigm*, ed. S.S. Holt, S.G. Neff, and C.M. Urry, 377-385. (Invited review)

26. Marscher, A.P. “Emission Models for Compact Jets,” 1992, in *Physics of Active Galactic Nuclei*, ed. W.J. Duschl and S.J. Wagner (Heidelberg: Springer-Verlag), 510-524. (Invited review)
27. Marscher, A.P. “Compact Extragalactic Radio Jets,” 1993, in *Astrophysical Jets, STScI Symposium Series*, **6**, ed. D. Burgarella, M. Livio, and C. O’Dea (Cambridge U. Press), 73–94. (Invited review)
28. Bloom, S.D., and Marscher, A.P. “Examining the Synchrotron Self-Compton Model for Blazars,” 1993, in *Compton Gamma-Ray Observatory*, ed. M. Friedlander, N. Gehrels, and D.J. Macomb, American Institute of Physics Conference Proceedings **280**, 578–582.
29. Marscher, A.P. “Interpretation of Multiwavelength Observations of Nonthermal Extragalactic Radio Sources,” 1993, in *Sub-Arcsecond Radio Astronomy*, ed. R.J. Davis and R.S. Booth (Cambridge U. Press), 297–302. (Invited review)
30. Marscher, A.P., Bania, T.M., and Wang, Z. “Probing the Milliarcsecond-Scale Structure of Molecular Clouds,” 1993, in *Sub-Arcsecond Radio Astronomy*, ed. R.J. Davis and R.S. Booth (Cambridge U. Press), 84–85.
31. Marscher, A.P., Bania, T.M., and Wang, Z. “Probing the AU-Scale Structure of Molecular Clouds,” 1993, in IAU Colloquium 140, *Astronomy with Millimeter and Submillimeter Wave Interferometry*, ed. M. Ishiguro and W.J. Welch, *Astronomical Society of the Pacific Conference Series*, **59** (San Francisco), 264–265.
32. Marscher, A.P., and Bloom, S.D. “Multi-Waveband Studies of Compact Extragalactic Radio Sources,” 1994, in *Compact Extragalactic Radio Sources*, ed. J.A. Zensus and K.I. Kellermann (Socorro, NM: National Radio Astronomy Observatory), 179–184.
33. Marcaide, J.M., Alberdi, A., Gómez, J.L., Guirado, J.C., Marscher, A.P., and Zhang, Y.F. “Peculiar Quasar 4C 39.25 Deciphered,” 1994, in *Compact Extragalactic Radio Sources*, ed. J.A. Zensus and K.I. Kellermann (Socorro, NM: National Radio Astronomy Observatory), 141–148.
34. Marscher, A.P., Bloom, S.D., Zhang, Y.F., and Gear, W.K. “Contemporaneous Multiwaveband Observations of Blazars,” 1994, in IAU Symposium 159, *Multi-Wavelength Continuum Emission of Active Galactic Nuclei*, ed. T.J.-L. Courvoisier and A. Blecha (Dordrecht: Kluwer), 155–158.
35. Marscher, A.P., and Bloom, S.D. “Nonthermal Gamma-Ray Emission from Blazars,” 1994, in *The Second Compton Symposium*, ed. C. Fichtel, N. Gehrels, & J.P. Norris, AIP Conf. Proc. **304**, 572–581. (Invited review)
36. Zhang, Y.F., and Marscher, A.P. “Excess X-Ray Absorption toward Giga-Hertz Peaked Radio Sources,” 1994, in *The Soft X-ray Cosmos* (Proceedings of the 1993 ROSAT Science Symposium), ed. E. Schlegel and R. Petre, AIP Conf. Proc. **313**, 403–405.
37. Zhang, Y.F., and Marscher, A.P. “X-Ray Variability of the Quasar 4C 39.25 and Bent Relativistic Jets,” 1994, in *The Soft X-ray Cosmos* (Proceedings of the 1993 ROSAT Science Symposium), ed. E. Schlegel and R. Petre, AIP Conf. Proc. **313**, 406–408.
38. Marscher, A.P. “The Inner Jets of Blazars,” 1996, in *Energy Transport in Radio Galaxies and Quasars*, ed. P.E. Hardee, A.H. Bridle, and J.A. Zensus, ASP Conference Series **100** (San Francisco: Astronomical Society of the Pacific), 45–54. (Invited review)

39. Georganopoulos, M., and Marscher, A.P. “Synchrotron Emission from the Inner Jet of Blazars,” 1996, in *Energy Transport in Radio Galaxies and Quasars*, ed. P.E. Hardee, A.H. Bridle, and J.A. Zensus, ASP Conference Series **100** (San Francisco: Astronomical Society of the Pacific), 67–72.
40. Gómez, J.L., Martí, J.M., Marscher, A.P., Ibáñez, J.M., and Marcaide, J.M. “Time-Variable Synchrotron Emission from Hydrodynamic Relativistic Jets,” 1996, in *Energy Transport in Radio Galaxies and Quasars*, ed. P.E. Hardee, A.H. Bridle, and J.A. Zensus, ASP Conference Series **100** (San Francisco: Astronomical Society of the Pacific), 159–164.
41. Marscher, A.P. “Variability of the Nonthermal Emission in the Jets of Blazars,” 1996, in “Blazar Continuum Variability,” ed. H.R. Miller, J.R. Webb, and J.C. Noble, ASP Conference Series **110** (San Francisco: Astron. Soc. of the Pacific), 248–261. (Invited Review)
42. Mukherjee, R., Gear, W.K., Marscher, A.P., Moore, E.M., Travis, J.P., Zhang, Y.F., Robson, E.I., Stevens, J.A., Teräsanta, H., Tornikoski, M., and Wagner, S.J. “High Energy Gamma Radiation from PKS 0528+134 Observed by EGRET,” 1996, in “Blazar Continuum Variability,” ed. H.R. Miller, J.R. Webb, and J.C. Noble, ASP Conference Series **110** (San Francisco: Astron. Soc. of the Pacific), 346–351.
43. Georganopoulos, M., and Marscher, A.P. “The Accelerating Jet Model: Steady State and Variability Properties of Blazars,” 1996, in “Blazar Continuum Variability,” ed. H.R. Miller, J.R. Webb, and J.C. Noble, ASP Conference Series **110** (San Francisco: Astron. Soc. of the Pacific), 262–267.
44. Gómez, J.L., Martí, J.M., Marscher, A.P., and Ibáñez, J.M. “Radio Variability in Simulated Hydrodynamic Relativistic Jets,” 1996, in “Blazar Continuum Variability,” ed. H.R. Miller, J.R. Webb, and J.C. Noble, ASP Conference Series **110** (San Francisco: Astron. Soc. of the Pacific), 242–247.
45. Wehrle, A.E., Unwin, S.C., Zook, A.C., Urry, C.M., Marscher, A.P., and Teräsanta, H. “VLBI Imaging and Multiwavelength Variability of 3C279,” 1996, in “Blazar Continuum Variability,” ed. H.R. Miller, J.R. Webb, and J.C. Noble, ASP Conference Series **110** (San Francisco: Astron. Soc. of the Pacific), 430–435.
46. Marscher, A.P. “High-Frequency VLBI Observations and Theoretical Thoughts of Gamma-Ray Blazars,” 1997, in Proceedings of the Heidelberg Workshop on “Gamma-Ray Emitting AGN,” ed. J.G. Kirk, M. Camenzind, C. von Montigny, & S. Wagner (Heidelberg: Max-Planck-Institut für Kernphysik), 103–108.
47. Gómez, J.L., Martí, J.M., Marscher, A.P., and Ibáñez, J.M. “Relativistic Simulations of Superluminal Sources,” 1997, *Vistas of Astronomy*, **41**, 79–85.
48. Marscher, A.P. “Millimeter-Wave VLBI: The Best Resolution for Our Problems,” 1997, in *Millimeter-VLBI Science Workshop*, ed. R. Barvainis and R.B. Phillips (Westford, MA: Haystack Observatory), 91–94. (Invited workshop summary)
49. Marscher, A.P., Marchenko, S.G., Wehrle, A.E., Xu, W., Bloom, S.D., and Moore, E.M. “7mm VLBI Observations of 3C 454.3: The Nature of the Core,” 1997, in *Millimeter-VLBI Science Workshop*, ed. R. Barvainis and R.B. Phillips (Westford, MA: Haystack Observatory), 43–46.
50. Georganopoulos, M., and Marscher, A.P. “Variability in the Accelerating Inner Jet Model of

- PKS 2155–304,” 1997, in *Relativistic Jets in AGNs*, ed. M. Ostrowski, M. Sikora, G. Madejski, and M. Begelman (Cracow, Poland), 313–317.
51. Gómez, J.L., Martí, J.M., Marscher, A.P., Ibáñez, J.M., and Alberdi, A. 1997, “Numerical Simulations of Superluminal Sources,” 1997, in *Relativistic Jets in AGNs*, ed. M. Ostrowski, M. Sikora, G. Madejski, and M. Begelman (Cracow, Poland), 100–103.
52. Marscher, A.P., Marchenko, S.G., Wehrle, A.E., Xu, W., Bloom, S.D., and Moore, E.M. “7mm VLBI Observations of 3C 454.3,” 1997, in *Modern Problems of Radio Astronomy*, (St. Petersburg, Russia: Inst. for Applied Astronomy) **1**, 174–175.
53. Marchenko, S.G., Marscher, A.P., Mattox, J.R., Wehrle, A.E., and Xu, W. “Multi-Epoch VLBA Observations of  $\gamma$ -Ray Bright Blazars,” 1997, in *Modern Problems of Radio Astronomy*, (St. Petersburg, Russia: Inst. for Applied Astronomy) **1**, 209–210.
54. Gómez, J.L., Martí, J.M., Marscher, A.P., Ibáñez, J.M., and Alberdi, A. “Hydrodynamical Models of Superluminal Sources,” 1998, in *Astrophysical Jets: Open Problems*, ed. S. Massaglia and G. Bodo (Amsterdam: Gordon and Breach), 95–105.
55. Marscher, A.P. “The Blazar Paradigm: Synchro-Compton Emission from Relativistic Jets,” 1998, in IAU Colloquium 164, *Radio Emission from Galactic and Extragalactic Compact Sources*, ed. J.A. Zensus, J.M. Wrobel, and G.B. Taylor, Astronomical Soc. Pacific Conf. Ser. **144**, 25–32.
56. Gómez, J.L., Martí, J.M., Marscher, A.P., Ibáñez, J.M., and Alberdi, A. “Relativistic Numerical Simulations of Superluminal Sources,” 1998, in IAU Colloquium 164, *Radio Emission from Galactic and Extragalactic Compact Sources*, ed. J.A. Zensus, J.M. Wrobel, and G.B. Taylor, Astronomical Soc. Pacific Conf. Ser. **144**, 49–50.
57. Marchenko, S.G., Marscher, A.P., Mattox, J.R., Wehrle, A.E., and Xu, W. “Multi-Epoch VLBA Observations of  $\gamma$ -Ray Bright Blazars,” 1998, in IAU Colloquium 164, *Radio Emission from Galactic and Extragalactic Compact Sources*, ed. J.A. Zensus, J.M. Wrobel, and G.B. Taylor, Astronomical Soc. Pacific Conf. Ser. **144**, 67–68.
58. Unwin, S.C., Wehrle, A.E., Xu, W., Zook, A.C., and Marscher, A.P. “Superluminal Motion in the Gamma-Ray Blazar 3C 279,” 1998, in IAU Colloquium 164, *Radio Emission from Galactic and Extragalactic Compact Sources*, ed. J.A. Zensus, J.M. Wrobel, and G.B. Taylor, Astronomical Soc. Pacific Conf. Ser. **144**, 69–70.
59. Alberdi, A., Lara, L., Gómez, J.L., Marcaide, J.M., Pérez-Torres, M.A., Kembball, A., Leppänen, K., Marscher, A.P., Patnaik, A., and Porcas, R. “Magnetic Field Configuration in 4C 39.25,” 1998, in IAU Colloquium 164, *Radio Emission from Galactic and Extragalactic Compact Sources*, ed. J.A. Zensus, J.M. Wrobel, and G.B. Taylor, Astronomical Soc. Pacific Conf. Ser. **144**, 115–116.
60. Gómez, J.L., Marscher, A.P., Alberdi, A., Martí, J.M., and Ibáñez, J.M. “VLBA Observations of 3C 120,” 1998, in IAU Colloquium 164, *Radio Emission from Galactic and Extragalactic Compact Sources*, ed. J.A. Zensus, J.M. Wrobel, and G.B. Taylor, Astronomical Soc. Pacific Conf. Ser. **144**, 119–120.
61. Lister, M.L., and Marscher, A.P. “Statistical Effects of Doppler Beaming and Malmquist Bias on Flux-Limited Samples of Compact Radio Sources,” 1998, in IAU Colloquium 164, *Radio Emission from Galactic and Extragalactic Compact Sources*, ed. J.A. Zensus, J.M. Wrobel, and G.B. Taylor,

Astronomical Soc. Pacific Conf. Ser. **144**, 137–138.

62. Xu, W., Wehrle, A.E., and Marscher, A.P. “VLBA Monitoring of Three Gamma-Ray Bright Blazars: AO 0235+164, 1633+382 (4C 38.41), & 2230+114 (CTA 102),” 1998, in IAU Colloquium 164, *Radio Emission from Galactic and Extragalactic Compact Sources*, ed. J.A. Zensus, J.M. Wrobel, and G.B. Taylor, Astronomical Soc. Pacific Conf. Ser. **144**, 175–176.

63. Aller, M.F., Marscher, A.P., *et al.* “Radio to  $\gamma$ -Ray Observations of 3C 454.3: 1993–1995,” 1998, in *Proceedings of the Fourth Compton Symposium*, ed. C.D. Dermer, M.S. Strickman, and J.D. Kurfess, AIP Conf. Proc., **410**, 1423–1427.

64. Mukherjee, R., ..., Marscher, A.P., *et al.* “EGRET Observations of PKS 0528+134 from 1991 to 1997,” 1998, in *Proceedings of the Fourth Compton Symposium*, ed. C.D. Dermer, M.S. Strickman, and J.D. Kurfess, AIP Conf. Proc., **410**, 1346–1350.

65. Wehrle, A.E., ..., Marscher, A.P., *et al.* “Multiwavelength Observations of the February 1996 High-Energy Flare in the Blazar 3C 279,” 1998, *Proceedings of the Fourth Compton Symposium*, ed. C.D. Dermer, M.S. Strickman, and J.D. Kurfess, AIP Conf. Proc., **410**, 1417–1422.

66. Xu, W., Wehrle, A.E., and Marscher, A.P. “VLBA Monitoring of Three Gamma-Ray Bright Blazars: AO 0235+164, 1633+382 (4C 38.41), & 2230+114 (CTA 102),” 1998, *Proceedings of the Fourth Compton Symposium*, ed. C.D. Dermer, M.S. Strickman, and J.D. Kurfess, AIP Conf. Proc., **410**, 1437–1441.

67. Marscher, A.P. “Some Theoretical Thoughts about OJ 287,” 1998, in *Multifrequency Monitoring of Blazars*, Publ. Osservatorio Astronomico Università di Perugia, ed. G. Tosti and L. Takalo, **3**, 81–86.

68. Marscher, A.P., and Marchenko, S.G. “High-Frequency VLBI observations of OJ 287 and 3C 66A,” 1998, in *Multifrequency Monitoring of Blazars*, Publ. Osservatorio Astronomico Università di Perugia, ed. G. Tosti and L. Takalo, **3**, 68–73.

69. Marchenko, S.G., Marscher, A.P., and Tosti, G. “Analysis of the Photometric Behaviour of OJ 287 in the Near-IR–Optical Region in February 1997,” 1998, in *Multifrequency Monitoring of Blazars*, Publ. Osservatorio Astronomico Università di Perugia, ed. G. Tosti and L. Takalo, **3**, 36–42.

70. Marscher, A.P., and Marchenko, S.G. “The Compact Jets of BL Lac Objects,” 1999, in *The BL Lac Phenomenon*, ed. L. Takalo and A. Sillanpää, Astronomical Soc. Pacific Conf. Ser. **159**, 417–426.

71. Gómez, J.L., Marscher, A.P., Alberdi, A., Martí, J.M., Ibáñez, J.M., and Marchenko, S.G. “A Close-Up Look at Superluminal Motion: Subparsec Radio Observations of 3C 120 and its Comparison with Numerical Simulations,” 1999, in *The BL Lac Phenomenon*, ed. L. Takalo and A. Sillanpää, Astronomical Soc. Pacific Conf. Ser. **159**, 435–438.

72. Georganopoulos, M., and Marscher, A.P. “Self-Similarity and Observed Properties in Blazars,” 1999, in *The BL Lac Phenomenon*, ed. L. Takalo and A. Sillanpää, Astronomical Soc. Pacific Conf. Ser. **159**, 359–364.

73. Alberdi, A., Gómez, J.L., Marcaide, J.M., Marscher, A.P., and Pérez-Torres, M.A. “The Parsec Scale Radio Jet of 4C 39.25: Witnessing the Interaction between a Superluminal and a Stationary Component,” 1999, in *The BL Lac Phenomenon*, ed. L. Takalo and A. Sillanpää, Astronomical Soc.

Pacific Conf. Ser. **159**, 452–453.

74. Yurchenko, A.V., Marchenko, S.G., and Marscher, A.P. “Parsec-Scale Behavior of NRAO 190 after  $\gamma$ -ray Outburst in August 1994,” 1999, in *The BL Lac Phenomenon*, ed. L. Takalo and A. Sillanpää, *Astronomical Soc. Pacific Conf. Ser.* **159**, 454–455.

75. Marscher, A.P., and Marchenko, S.G. “High-Frequency VLBA Polarimetry of Jets in Blazars,” 1999, in *Second Millimeter-VLBI Workshop*, ed. A. Greve and T.P. Krichbaum (IRAM), 41–44.

76. Marchenko, S.G., and Marscher, A.P. “Multi-Epoch VLBA Observations of Gamma-Ray Bright Blazars,” 1999, in *Second Millimeter-VLBI Workshop*, ed. A. Greve and T.P. Krichbaum (IRAM), 45–48.

77. Gómez, J.L., Alberdi, A., and Marscher, A.P. “Millimeter VLBI Observations of 3C 120,” 1999, in *Second Millimeter-VLBI Workshop*, ed. A. Greve and T.P. Krichbaum (IRAM), 17–20.

78. Marscher, A.P., Marchenko-Jorstad, S.G., Mattox, J.R., Wehrle, A.E., and Aller, M.F. “High-Frequency Observations of Blazars,” 2000, in *Astrophysical Phenomena Revealed by Space VLBI*, ed. H. Hirabayashi, P.G. Edwards, and D.W. Murphy (Sagamihara, Japan: ISAS), 39–46.

79. Marscher, A.P. “The Proposed ARISE Space-VLBI Mission,” 2000, in *Astrophysical Phenomena Revealed by Space VLBI*, ed. H. Hirabayashi, P.G. Edwards, and D.W. Murphy (Sagamihara, Japan: ISAS), 261–264.

80. Marchenko-Jorstad, S.G., Marscher, A.P., Mattox, J.R., J. Hallum, Wehrle, A.E., and Bloom, S.D. “Connection between Superluminal Ejections and Gamma-Ray Flares in Blazars,” 2000, in *Astrophysical Phenomena Revealed by Space VLBI*, ed. H. Hirabayashi, P.G. Edwards, and D.W. Murphy (Sagamihara, Japan: ISAS), 305–308.

81. Marscher, A.P., Marchenko, S.G., Mattox, J.R., Hallum, J., Wehrle, A.E., and Bloom, S.D. “Multi-Epoch VLBA Observations of Gamma-Ray Bright Blazars,” 2000, in *Proceedings of the 5th Compton Symposium*, ed. M.L. McConnell and J.M. Ryan, *AIP Conf. Proc.* **510**, 362–366.

82. Marchenko, S.G., Marscher, A.P., Mattox, J.R., Hallum, J., Wehrle, A.E., and Bloom, S.D. “Comparison of Epochs of Ejection of Superluminal Components with the Gamma-Ray Light Curves of EGRET Blazars,” 2000, in *Proceedings of the 5th Compton Symposium*, ed. M.L. McConnell and J.M. Ryan, *AIP Conf. Proc.* **510**, 357–361.

83. Marscher, A.P. “Time Delays of Blazar Flares Observed at Different Wavebands,” 2001, in *Probing the Physics of Active Galactic Nuclei by Multiwavelength Monitoring*, ed. B.M. Peterson, R.S. Polidan, and R.W. Pogge, *Astronomical Soc. Pacific Conf. Ser.*, **224**, 23–34.

84. Jorstad, S.G., and Marscher, A.P. “Connection Between Parsec-Scale Jet Properties and Gamma-Ray Emission of Blazars,” 2001, in *Probing the Physics of Active Galactic Nuclei by Multiwavelength Monitoring*, ed. B.M. Peterson, R.S. Polidan, and R.W. Pogge, *Astronomical Soc. Pacific Conf. Ser.*, **224**, 255–264.

85. Marscher, A.P., and Jorstad, S.G. “Images and Polarization of Compact Jets in Blazars,” 2001, in *Blazar Demographics and Physics*, ed. P. Padovani and C.M. Urry, *Astronomical Soc. Pacific Conf. Ser.*, **227**, 10–17.

86. Jorstad, S.G., Marscher, A.P., Aller, M., and Aller, H. “Connection between Superluminal Ejections and  $\gamma$ -Ray Flares in Blazars,” 2001, in *Blazar Demographics and Physics*, ed. P. Padovani and C.M. Urry, *Astronomical Soc. Pacific Conf. Ser.*, **227**, 69–72.
87. Agudo I., Gómez J.L., Gabuzda D.C., Guirado J.C., Alberdi A., Marscher A.P., Aloy M.A., and Martí J.M., “Polarimetric VLBI Observations of 0735+178,” 2001, in *Proceedings of the 5th EVN Symposium*, ed. J.E. Conway, A.G. Polatidis, R.S. Booth, and Y.M. Pihlström (Onsala, Sweden: Onsala Space Observatory), 67–70.
88. Alberdi, A., Gómez, J.L., Marcaide, J.M., Marscher, A.P., Jorstad, S.G., Perez-Torres, M.A., and García-Miró, C. “Recent Results on High Frequency Polarimetric VLBI Observations of Relativistic Jets,” 2001, in *Proceedings of the 5th EVN Symposium*, ed. J.E. Conway, A.G. Polatidis, R.S. Booth, and Y.M. Pihlström (Onsala, Sweden: Onsala Space Observatory), 59–62.
89. Agudo I., Gómez J.L., Martí J. M., Ibáñez J.M., Marscher A.P., Alberdi A., Aloy M.A., and Hardee P.E. “Hydrodynamical and Emission Simulations of Relativistic Jets: Stability and Generation of Superluminal and Stationary Components,” 2001, in *Third Microquasar Workshop 2000 Proceedings*, ed. A.J. Castro-Tirado, J. Greiner, and J.M. Paredes, *Kluwer Academic Publishers*, 293–294.
90. Agudo I., Gómez J.L., Martí J.M., Ibáñez J.M., Marscher A.P., Alberdi A., Aloy M.A. and Hardee, P.E., “A New Mechanism for Generation of Knoty Jet Structures. Stability Studies,” 2001, in *Similarities and Universality of Relativistic Flows 2000* (Berlin: Logos Verlag), ed. M. Georganopoulos, A. Guthmann, K. Manolakou, and A. Marcowith, 65–73.
91. Krichbaum, T.P., Graham, D.A., Witzel, A., Zensus, J.A., Greve, A., Grewing, M., Marscher, A., and Beasley, A.J. “A High-Frequency and Multi-Epoch VLBI Study of 3C 273,” 2001, in *Particles and Fields in Radio Galaxies*, ed. R.A. Laing and K.M. Blundell, *Astronomical Soc. Pacific Conf. Ser.*, **250**, 184–190.
92. Agudo, I., Gómez, J.L., Gabuzda, D.C., Alberdi, A., Marscher, A.P., and Jorstad, S.G. “Multi-Frequency VLBI Observations of the BL Lac 0735+178,” 2002, in *Proc. of the 6th European VLBI Network Symposium*, ed. E. Ros, R.W. Porcas, and J.A. Zensus (Bonn, Germany: Max-Planck-Institut), 115–118.
93. Marscher, A.P., Jorstad, S.G., McHardy, I.M., Aller, M.F., Balonek, T.J., Villata, M., Raiteri, C.M., Ostorero, L., Tosti, G., and Teräsranta, H. “The Relationship between X-Rays and Relativistic Jets,” 2002, in *Blazar Astrophysics with BeppoSAX and other Observatories*, ed. P. Giommi, E. Massaro, and G. Palumbo (Frascati, Italy: Agenzia Spaziale Italiana), 243–249.
94. Jorstad, S.G., Marscher, A.P., Aller, M.F., Balonek, Gómez, J.L., McHardy, I.M., Teräsranta, H., Raiteri, C.M., and Tosti, G. “Multifrequency Monitoring of 3C 120, 3C 279, and PKS 1510–089,” 2002, in *Blazar Astrophysics with BeppoSAX and other Observatories*, ed. P. Giommi, E. Massaro, and G. Palumbo (Frascati, Italy: Agenzia Spaziale Italiana), 185–188.
95. Jorstad, S.G., and Marscher, A.P. “VLBI Properties of Gamma-Ray Bright Blazars,” 2002, in *Blazar Astrophysics with BeppoSAX and other Observatories*, ed. P. Giommi, E. Massaro, and G. Palumbo (Frascati, Italy: Agenzia Spaziale Italiana), 151–156.
96. Marscher, A.P., Jorstad, S.G., McHardy, I.M., Aller, M.F., Balonek, T.J., Villata, M., Raiteri, C.M., Ostorero, L., Tosti, G., and Teräsranta, H. “The Connection between X-Ray and Radio-Optical



- Emission in Blazars,” 2003, in *High Energy Blazar Astronomy*, ed. L.O. Takalo and E. Valtaoja, *Astronomical Soc. Pacific Conf. Ser.*, **299**, 173–182.
97. Jorstad, S.G., and Marscher, A.P. “Superluminal Motion of Gamma-Ray Blazars,” 2003, in *High Energy Blazar Astronomy*, ed. L.O. Takalo and E. Valtaoja, *Astronomical Soc. Pacific Conf. Ser.*, **299**, 111–116.
98. Sokolov, A., and Marscher, A.P. “A Theoretical Study of Multifrequency Variability in Blazar Jets,” 2003 in *High Energy Blazar Astronomy*, ed. L.O. Takalo and E. Valtaoja, *Astronomical Soc. Pacific Conf. Ser.*, **299**, 153–156.
99. Savolainen, T., Wiik, K., Valtaoja, E., Jorstad, S.G., and Marscher, A.P. “Connections between Millimetre Continuum Flares and the Parsec-Scale Jet Structure in Blazars,” 2003, in *High Energy Blazar Astronomy*, ed. L.O. Takalo and E. Valtaoja, *Astronomical Soc. Pacific Conf. Ser.*, **299**, 259–264.
100. Marscher, A.P. “Relativistic Jets in Blazars: Where the Action Is,” 2003, in *Radio Astronomy at the Fringe*, ed. J.A. Zensus, M.H. Cohen, and E. Ros, *Astronomical Soc. Pacific Conf. Ser.*, **300**, 133–140.
101. Jorstad, S., and Marscher, A.P. “VLBI Properties of Gamma-Ray Blazars,” 2003, in *Radio Astronomy at the Fringe*, ed. J.A. Zensus, M.H. Cohen, and E. Ros, *Astronomical Soc. Pacific Conf. Ser.*, **300**, 89–96.
102. Marscher, A.P., Jorstad, S.J., Aller, M.F., McHardy, I.M., Balonek, T.J., Terasranta, H., and Tosti, G. “Relative Timing of Variability of Blazars at X-Ray and Lower Frequencies,” 2004, in *X-Ray Timing 2003: Rossi and Beyond*, ed. P. Kaaret, F.K. Lamb, and J.H. Swank, AIP Conf. Proc., **714**, 167–173.
103. Marshall, K., Ferrara, E.C., Miller, H.R., Marscher, A.P., and Madejski, G. “X-ray/Optical Variability of Akn 120 and 3C 120,” 2004, in *X-Ray Timing 2003: Rossi and Beyond*, ed. P. Kaaret, F.K. Lamb, and J.H. Swank, AIP Conf. Proc., **714**, 182–185.
104. Sokolov, A., and Marscher, A.P. “Modeling of Multifrequency Variability of Blazars,” 2004, in *X-Ray Timing 2003: Rossi and Beyond*, ed. P. Kaaret, F.K. Lamb, and J.H. Swank, AIP Conf. Proc., **714**, 198–201.
105. Jorstad, S.G., Marscher, A.P., McHardy, I.M., Makrides, K., Salem, D., Balonek, T.J., Kartaltepe, J., Aller, M.F., Larionov, V., Efimova, N., Raiteri, C., Villata, M., Kurtanidze, O., Gaskell, M., and Turler, M. “Multi-Frequency Monitoring of Three Gamma-Ray Quasars,” 2004, in *X-Ray Timing 2003: Rossi and Beyond*, ed. P. Kaaret, F.K. Lamb, and J.H. Swank, AIP Conf. Proc., **714**, 202–205.
106. Marscher, A.P. “The Relationship between Radio and Higher-Frequency Emission in Active Galactic Nuclei,” 2005, in *Multiband Approach to AGN*, ed. A. Lobanov, *Memorie della Societa Astronomica Italiana*, **76**, 13–20.
107. Jorstad, S.G., and Marscher, A.P. “Highly Variable Apparent Speed in the Quasar 3C 279,” 2005, in *Multiband Approach to AGN*, ed. A. Lobanov, *Memorie della Societa Astronomica Italiana*, **76**, 106–109.

108. Kadler, M., Ros, E., Kerp, J., Roy, A.L., Marscher, A.P., and Zensus, J.A. “A Multiband Approach to AGN: Radioscopy & Radio Astronomy,” 2005, in *Multiband Approach to AGN*, ed. A. Lobanov, *Memorie della Societa Astronomica Italiana*, **76**, 126–129.
109. Marscher, A.P. “Multiband Impressions of Active Galactic Nuclei,” 2005, in *Multiband Approach to AGN*, ed. A. Lobanov, *Memorie della Societa Astronomica Italiana*, **76**, 168–172.
110. Marscher, A.P. “Are 3C 120 and Other Active Galactic Nuclei Overweight Microquasars?” 2005, in *From X-ray Binaries to Quasars: Black Hole Accretion on All Mass Scales*, ed. T. Maccarone, *Astrophys. Space Sci.*, **300**, 39–44.
111. Marscher, A.P. “Relationship between High-Frequency Emission and the Radio Jet in Blazars,” 2005, in *Future Directions in High Resolution Astronomy: The 10th Anniversary of the VLBA*, ed. J.D. Romney and M.J. Reid, *Astronomical Soc. Pacific Conf. Ser.*, **340**, 25-29.
112. Jorstad, S.G., Marscher, A.P., Stevens, J., Robson, I., Lister, M., Stirling, A., Cawthorne, T., Smith, P., Gómez, J.L., Gabuzda, D., and Gear, W. “Polarimetric Observations of 15 AGNs at High Frequencies,” 2005, in *Future Directions in High Resolution Astronomy: The 10th Anniversary of the VLBA*, ed. J.D. Romney and M.J. Reid, *Astronomical Soc. Pacific Conf. Ser.*, **340**, 183-185.
113. Marscher, A.P. “X-ray and Radio Emission in the Nuclei of Radio Galaxies and the Disk-Jet Connection,” 2005, in *High-z Radio Galaxies*, ed. M. Villar Martin et al., *Astronomische Nachrichten*, **327**, 217-222.
114. Jorstad, S.G., and Marscher, A.P. “The X-ray and Radio Jets of Quasars on Kiloparsec Scales,” 2005, in *High-z Radio Galaxies*, ed. M. Villar Martin et al., *Astronomische Nachrichten*, **327**, 227-230.
115. Marscher, A.P., and Jorstad, S.G. “Polarization Monitoring as a Probe of Blazar Jets on the Finest Scales,” 2005, in *Astronomical Polarimetry: Current Status and Future Directions*, ed. A. Adamson, C. Aspin, and C.J. Davis, *Astronomical Soc. Pacific Conf. Ser.*, **343**, 480-484.
116. Jorstad, S.G., Marscher, A.P., et al. “Multi-frequency Polarization Properties of Blazars,” 2005, in *Astronomical Polarimetry: Current Status and Future Directions*, ed. A. Adamson, C. Aspin, and C.J. Davis, *Astronomical Soc. Pacific Conf. Ser.*, **343**, 469–473.
117. Jorstad, S.G., and Marscher, A.P. “Jet Kinematics of AGNs at High Radio Frequencies,” 2006, in *Variability of Blazars II: Entering the GLAST Era*, ed. H.R. Miller et al., *Astron. Soc. Pacific Conf. Ser.*, **350**, 149–154.
118. Marscher, A.P. “Probing the Compact Jets of Blazars with Light Curves, Images, and Polarization,” 2006, in *Variability of Blazars II: Entering the GLAST Era*, ed. H.R. Miller et al., *Astron. Soc. Pacific Conf. Ser.*, 155–162.
119. Marscher, A.P. “Relativistic Jets in Active Galactic Nuclei,” 2006, in *Relativistic Jets: The Common Physics of AGN, Microquasars and Gamma-Ray Bursts*, ed. P.A. Hughes and J.N. Bregman, *AIP Conf. Proc.*, **856**, 1–22.
120. Marscher, A.P., and Jorstad, S.G. “3C 120 and the Disk-Jet Connection,” 2006, in *AGN Variability from X-Rays to Radio Waves*, ed. C.M. Gaskell et al., *Astronomical Soc. Pacific Conf. Ser.*, **360**, 153–156.

121. Jorstad, S.G., Marscher, A.P., Aller, M.F., and Balonek, T.J. “X-ray, Optical, and Radio Monitoring of Gamma-Ray Blazars,” 2006, in *AGN Variability from X-Rays to Radio Waves*, ed. C.M. Gaskell *et al.*, *Astronomical Soc. Pacific Conf. Ser.*, **360**, 169–172.
122. Marscher, A.P. “The Intimate Connection between High and Low Frequency Emission in Blazars,” 2006, in *Multifrequency Behaviour of High Energy Cosmic Sources*, ed. F. Giovanelli and L. Sabau-Graziati, *Chinese J. Physics*, **6**, 262–268.
123. Jorstad, S., Marscher, A., Stevens, J., Smith, P., Forster, J., Lister, M., Stirling, A., Gómez, J., Cawthorne, T., Gear, W., and Robson, I. “Multifrequency Polarization Properties of Blazars,” 2006, in *Multifrequency Behaviour of High Energy Cosmic Sources*, ed. F. Giovanelli and L. Sabau-Graziati, *Chinese J. Physics*, **6**, 247–252.
124. Marscher, A.P. “Progress in Our Understanding of Blazars,” 2006, in *Proceedings of the 8th ENIGMA Meeting*, ed. T. Hovatta, E. Nieppola, and I. Tonriainen (Metsähovi Radio Observatory), 16–23. ([http://kurp.hut.fi/enigma/Enigma8\\_proceedings.pdf](http://kurp.hut.fi/enigma/Enigma8_proceedings.pdf))
125. Marscher, A.P. “Relativistic Jets in Active Galactic Nuclei and their Relationship to the Central Engine,” 2006, *VI Microquasar Workshop: Microquasars and Beyond*, ed. T. Belloni, *Proc. of Science* [<http://pos.sissa.it>], **033**, paper 025 (14 pages).
126. Marscher, A.P., and Jorstad, S.G. “View of Active Galactic Nuclei from the Past and Present,” 2007, book chapter in *Astronomy 2006: Tradition, Present, and Future* (in Russian), ed. V. Orlov, V. Reshetnikov, and N. Sotnikova, 116–139.
127. Marscher, A.P., and Jorstad, S.G. “Use of Multiwaveband Polarization and Light Curves to Identify Sites of Gamma-Ray Emission in Blazar Jets,” 2007, in *Proceedings of the First International GLAST Symposium*, ed. S. Ritz, P.F. Michelson, and C. Meegan, *AIP Conf. Proc.*, **921**, 377–378.
128. Jorstad, S.G., and Marscher, A.P. “Kinematics of Jets in Gamma-Ray Blazars,” 2007, in *Proceedings of the First International GLAST Symposium*, ed. S. Ritz, P.F. Michelson, and C. Meegan, *AIP Conf. Proc.*, **921**, 337–338.
129. Schwartz, D.A., Harris, D.E., Landt, H., Siemiginowska, A., Perlman, E.S., Cheung, C.C., Gelbord, J.M., Worrall, D.M., Birkinshaw, M., Jorstad, S.G., Marscher, A.P., and Stawarz, L. “Detailed structure of the X-ray jet in 4C 19.44 (PKS1354+195),” 2007, in *Proceedings of IAU Symposium 238: Black Holes from Stars to Galaxies – Across the Range of Masses*, ed. V. Karas and G. Matt (Cambridge U. Press), 443–444.
130. Schwartz, D.A., Harris, D.E., Landt, H., Siemiginowska, A., Marshall, H.L., Gelbord, J.M., Perlman, E.S., Georganopoulos, M., Birkinshaw, M., Worrall, D.M., Cheung, C.C., Stawarz, L., Jorstad, S.G., Marscher, A.P., Uchiyama, Y., and Urry, C.M. “The X-ray jet and lobes of PKS 1354+195 (= 4C 19.44)” 2007, in *Proceedings of the Fifth Stromlo Symposium: Disks, Winds and Jets - From Planets to Quasars*, ed. M.A. Dopita *et al.*, *Astrophysics & Space Science*, **311**, 341–345.
131. Marscher, A.P. “The Core of a Blazar Jet,” 2008, in *Extragalactic Jets: Theory and Observation from Radio to Gamma Ray*, ed. T.A. Rector and D.S. De Young, *Astronomical Soc. Pacific Conf. Ser.*, **386**, 437–443.
132. Jorstad, S.G., and Marscher, A.P. “The Quasar 1317+520: A Laboratory for Particle Acceleration,” 2008, in *Extragalactic Jets: Theory and Observation from Radio to Gamma Ray*, ed.

- T.A. Rector and D.S. De Young, *Astronomical Soc. Pacific Conf. Ser.*, **386**, 219–226.
133. Krichbaum, T.P., Lee, S.S., Lobanov, A.P., Marscher, A.P., and Gurwell, M.A. “How Compact are the Cores of AGN? Sub-Parsec Scale Imaging with VLBI at Millimeter Wavelength,” 2008, in *Extragalactic Jets: Theory and Observation from Radio to Gamma Ray*, ed. T.A. Rector and D.S. De Young, *Astronomical Soc. Pacific Conf. Ser.*, **386**, 186–194.
134. Agudo, I., Bach, U., Krichbaum, T.P., Marscher, A.P., Gonidakis, I., Diamond, P.J., Alef, W., Graham, D., Witzel, A., Zensus, J.A., Bremer, M., Acosta-Pulido, J.A., and Barrena, R. “NRAO 150: A Recently Identified Quasar Revealing Extreme Non-Ballistic Motion,” 2008, in *Extragalactic Jets: Theory and Observation from Radio to Gamma Ray*, ed. T.A. Rector and D.S. De Young, *Astronomical Soc. Pacific Conf. Ser.*, **386**, 249–255.
135. Marscher, A.P. “Long-term X-ray Variability in Blazars and its Multi-Waveband Context,” 2008, in Workshop on Blazar Variability across the Electromagnetic Spectrum, ed. B. Giebels, *Proc. of Science* [<http://pos.sissa.it>], **063**, paper 010 (15 pages).
136. Gómez, J.L., Agudo, I., Marscher, A.P., Jorstad, S.G., Roca-Sogorb, M. “Stratification in Polarization and Faraday Rotation in the Jet of 3C 120”, 2008, in *Proceedings of Workshop on the Central Kiloparsec: Active Galactic Nuclei and Their Hosts*. ed. A. Lobanov et al., *Memorie della Societa Astronomica Italiana*, **79**, 1157–1161.
137. Marscher, A.P. “The Compact Structure of Blazars at High Frequencies,” 2009, in *Approaching Micro-Arcsecond Resolution with VSOP-2: Astrophysics and Technology*, ed. Y.Hagiwara et al., *Astronomical Soc. Pacific Conf. Ser.*, **402**, 196–201.
138. Jorstad, S., Marscher, A., D’Arcangelo, F., and Harrison, B. “Connection between Gamma-Ray Variations and Disturbances in the Jets of Blazars,” 2010, in *2009 Fermi Symposium* (eConference C091122), arXiv:0912.5230v2, 1–6.
139. Marscher, A.P., Jorstad, S.G., D’Arcangelo, F.D., Bhattarai, D., Taylor, B., Olmstead, A.R., Manne-Nicholas, E., Larionov, V.M., Hagen-Thorn, V.A., Konstantinova, T.S., Larionova, E.G., Larionova, L.V., Melnichuk, D.A., Blinov, D.A., Kopatskaya, E.N., Troitsky, I.S., Agudo, I., Gómez, J.L., Roca-Sogorb, M., Smith, P.S., Schmidt, G.D., Kurtanidze, O., Nikolashvili, M.G., Kimeridze, G.N., and Signal, L.A. “The Inner Jet of the Quasar PKS 1510–089 as Revealed by Multi-waveband Monitoring,” 2010, in *2009 Fermi Symposium*, ed. W.N. Johnson and D.J. Thompson (eConference C091122), arXiv:1002.0806v1, 6 pages.
140. Marscher, A.P., “Jets in Active Galactic Nuclei,” 2010, book chapter in *The Jet Paradigm — From Microquasars to Quasars*, ed. T. Belloni, *Lecture Notes in Physics*, **794**, 175–203.
141. Marscher, A.P., and Jorstad, S.G. “Rapid Variability of Gamma-ray Emission from Sites near the 43 GHz Cores of Blazar Jets,” 2010, in *Fermi Meets Jansky - AGN at Radio and Gamma-Rays*, ed. T. Savolainen et al. (Max-Planck-Institut für Radioastronomie), 171–174.
142. Jorstad, S., Marscher, A., Smith, P., Larionov, V., and Agudo, I. “Localization of the Gamma-ray Emission Site Using Multi-waveband Data and mm-VLBI,” 2010, in *Fermi Meets Jansky - AGN at Radio and Gamma-Rays*, ed. T. Savolainen et al. (Max-Planck-Institut für Radioastronomie), 115–120.
143. Agudo, I., Jorstad, S.G., Marscher, A.P., Larionov, V., Gomez, J.L., Wiesemeyer, H., Thum,

- C., Gurwell, M., Heidt, J., and D’Arcangelo, F.D. “The Multi-Spectral-Range Behavior of OJ287 in 2005-2010,” 2010, in *Fermi Meets Jansky - AGN at Radio and Gamma-Rays*, ed. T. Savolainen et al. (Max-Planck-Institut für Radioastronomie), 143–146.
144. Schinzel, F.K., Lobanov, A.P., Jorstad, S.G., Marscher, A.P., Taylor, G.B., and Zensus, J.A. “Radio Flaring Activity of 3C 345 and its Connection to Gamma-Ray Emission,” 2010, in *Fermi Meets Jansky - AGN at Radio and Gamma-Rays*, ed. T. Savolainen et al. (Max-Planck-Institut für Radioastronomie), 175–178.
145. Marscher, A.P. “Astrophysics: Broad Escape from the Abyss,” 2011, *Nature*, **477**, 164–165 (News & Views section).
146. Agudo, I., Jorstad, S.G., Marscher, A.P., Larionov, V.M., Gomez, J.L., Lähteenmäki, A., Gurwell, M.A., Smith, P.S., Wiesemeyer, H., Thum, C., and Heidt, J. “Gamma-ray Emission Region Located in the Parsec Scale Jet of OJ287,” 2011, in *Beamed and Unbeamed Gamma-rays from Galaxies, Journal of Physics: Conference Series*, in press, 6 pages.
147. Larionov, V.M., Jorstad, S.G., Marscher, A.P., Morozova, D.A., Troitsky, I.S., Blinov, D.A., Kopatskaya, E.N., and Larionova, E.G. “Optical Outburst of the Gamma-Ray Blazar S4 0954+658 in March-April 2011,” 2011, in *2011 Fermi Symposium*, (eConference C110509), arXiv:1110.5861, 4 pages.
148. Agudo, I., Jorstad, S.G., Marscher, A.P., Larionov, V.M., Gomez, J.L., Lähteenmäki, A., Gurwell, M.A., Smith, P.S., Wiesemeyer, H., Thum, C., and Heidt, J. “Gamma-ray Flaring Emission in Blazar OJ287 Located in the Jet  $>14$  pc from the Black Hole,” 2011, in *2011 Fermi Symposium*, (eConference C110509), arXiv:1110.6463, 4 pages.
149. Aller, M.F., Hughes, P.A., Aller, H.D., Marscher, A.P., Jorstad, S.G., Hovatta, T., and Aller, M.C. “Evidence for Shocks as the Origin of Gamma-Ray Flares in Blazars,” 2011, in *2011 Fermi Symposium*, (eConference C110509), arXiv:1110.6484, 4 pages.
150. Jorstad, S.G., Marscher, A.P., Agudo, I., and Harrison, B. “Parsec-Scale Behavior of Blazars during High Gamma-Ray States,” 2011, in *2011 Fermi Symposium*, (eConference C110509), arXiv:1111.0110, 4 pages.
151. Joshi, M., Marscher, A., Jorstad, S., Böttcher, M., Agudo, I., Larionov, V., Aller, M., Gurwell, M., and Lähteenmäki, A., “Multiwavelength Spectral Studies Of Fermi-LAT Blazars,” 2011, in *2011 Fermi Symposium*, (eConference C110509), arXiv:1111.0984, 4 pages.
152. Agudo, I., Molina, S.N., Gómez, J.L., Marscher, A.P., Jorstad, S.G., and Heidt, J. “MAPCAT: Monitoring AGN with Polarimetry at the Calar Alto Telescopes,” 2012, in *High Energy Phenomena in Relativistic Outflows III*, ed. J. Parides and M. Ribo, *International Journal of Modern Physics, Conference Series*, 4 pages.
153. Agudo, I., Marscher, A.P., Jorstad, S.G., Larionov, V.M., Gómez, J.L., Lähteenmäki, A., Smith, P.S., Nilsson, K., Readhead, A.C.S., Aller, M.F., Heidt, J., Gurwell, M., Thum, C., Wehrle, A.E., and Kurtanidze, O.M. “Location of the Gamma-Ray Flaring Emission in the Parse-Scale Jet of the BL Lac Object AO 0235+164,” 2012, in *High Energy Phenomena in Relativistic Outflows III*, ed. J. Parides and M. Ribo, *International Journal of Modern Physics, Conference Series*, 6 pages.
154. Jorstad, S.G., Marscher, A.P., Smith, P.S., Larionov, V.M., Agudo, I., Gómez, J.L., Casadio,

- C., Molina, S., and Gurwell, M. “Parsec-scale Jet Behavior of the Quasar 3C273 during a High Gamma-ray State in 2009-2010,” 2012, in *High Energy Phenomena in Relativistic Outflows III*, ed. J.M. Parides and M. Ribó, *International Journal of Modern Physics, Conference Series*, 4 pages.
155. Marscher, A.P. “The Structure and Emission of Compact Blazar Jets,” 2012, in *High Energy Phenomena in Relativistic Outflows III*, ed. J.M. Parides and M. Ribó, *International Journal of Modern Physics, Conference Series*, 12 pages.
156. Marscher, A.P. “Multi-waveband Variations of Blazars during Gamma-ray Outbursts,” 2011, in *2011 Fermi Symposium*, (eConference C110509), arXiv:1201.5402, 6 pages.
157. Marscher, A.P., Jorstad, S.G., Agudo, I., MacDonald, N.R., and Scott, T.L. “Relation between Events in the Millimeter-wave Core and Gamma-ray Outbursts in Blazar Jets,” 2012, in *Fermi and Jansky: Our Evolving Understanding of AGN*, ed. R. Ojha, D. Thompson, and C. Dermer (eConference C1111101), arXiv:1204.6707, 6 pages.
158. Jorstad, S.G., Marscher, A.P., Joshi, M., MacDonald, N.R., Scott, T.L., Williamson, K.E., Smith, P.S., Larionov, V.M., Agudo, I., and Gurwell, M. “Parsec-Scale Jet Behavior of the Quasar 3C 454.3 during the High Gamma-Ray States in 2009 and 2010,” 2012, in *Fermi and Jansky: Our Evolving Understanding of AGN*, ed. R. Ojha, D. Thompson, and C. Dermer (eConference C1111101), arXiv:1205.0520, 9 pages.
159. Joshi, M., Jorstad, S.G., Marscher, A.P., Böttcher, M., Agudo, A., Larionov, V., Aller, M., Gurwell, M., and Lähteenmäki, A. “Multiwavelength Spectral Study of 3C 279 in the Internal Shock Scenario,” 2012, in *Fermi and Jansky: Our Evolving Understanding of AGN*, ed. R. Ojha, D. Thompson, and C. Dermer (eConference C1111101), arXiv:1206.6147, 6 pages.
160. Marscher, A.P. “Turbulent Extreme Multi-Zone Model for Multi-Waveband Variations of Blazars,” 2013, in *2012 Fermi Symposium*, (eConference C121028), ed. N. Omodel, T. Brandt, and C. Wilson-Hodge, arXiv:1304.2064, 6 pages.
161. Marscher, A.P. “What Produces Cosmic Jets?” 2013, *Sky & Telescope*, special edition: *Astronomy’s 60 Greatest Mysteries*, p. 62 (popular review)
162. Nishikawa, K.-I., Hardee, P., Mizuno, Y., Dutan, I., Zhang, B., Medvedev, M., Choi, E.J., Min, K.W., Niemiec, J., Nordlund, A., Frederiksen, J., Sol, H., Pohl, M., Hartmann, D.H., Marscher, A., and Gómez, J.L. “Radiation from Accelerated Particles in Relativistic Jets with Shocks, Shear Flow, and Reconnection,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 02003 (6 pages).
163. Marscher, A.P. “Multi-waveband Behavior of Blazars,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 04001 (12 pages).
164. Jorstad, S.G., Marscher, A.P., Larionov, Gomez, J.L., Agudo, I., Angelakis, E., Casadio, C., Gurwell, M., Hovatta, T., Joshi, M., Fuhrmann, L., Karamanavis, V., Lähteenmäki, A., Molina, S., Morozova, D., Myserlis, I., Troitsky, I., Ungerechts, H., and Zensus, J.A. “The Gamma-ray Activity of the High-z Quasar 0836+71,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 04003 (7 pages).
165. Morozova, D.A., Jorstad, S.G., Marscher, A.P., Larionov, V.M., Troitskiy, I.S., Blinov, D.A.,

- Agudo, I., and Smith, P.S. “Multiwavelength Observations of 6 BL Lac Objects in 2008-2012,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 04018 (4 pages).
166. Larionov, V.M., Blinov, D.A., Jorstad, S.G., Marscher, A.P., Villata, M., Raiteri, C.M., Agudo, I., Smith, P.S., Morozova, D.A., Troitsky, I.S., and Clemens, D.P. “Prominent Outburst of the Blazar CTA102 in 2012,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 04019 (6 pages).
167. Joshi, M., Marscher, A.P., and Böttcher, M. “Constraining the Location of Gamma-ray Emission in Blazar Jets: High-energy Emission in Blazars,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 05004 (6 pages).
168. Kiehlmann, S., Savolainen, T., Jorstad, S.G., ..., Marscher, A.P., et al. “Analyzing Polarization Swings in 3C279,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 06003 (6 pages).
169. Acosta Pulido, J.A., Pereyra, A., Agudo, I., Agulli, I., Carnerero, M., Castro Segura, N., Gómez, J.L., Jorstad, S., and Marscher, A. “Near Infrared Polarimetry of a Sample of Blazars,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 06007 (6 pages).
170. Troitskiy, I.S., Morozova, D.A., Jorstad, S.G., Marscher, A.P., Larionov, V.M., Blinov, D.A., Agudo, I., and Smith, P.S. “Multiwavelength Polarization Observations of the Gamma-ray Bright Quasar PKS0420-014,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 07008 (4 pages).
171. Marscher, A.P. “The Innermost Regions of Relativistic Jets: Wrapping Up the Enigma,” 2013, in *The Innermost Regions of Relativistic Jets and Their Magnetic Fields*, EPJ Web of Conferences, **61**, ed. J.L. Gómez, article no. 09001 (8 pages).
172. Fish, V., . . . , Marscher, A.P., et al. “High-Angular-Resolution and High-Sensitivity Science Enabled by Beamformed ALMA,” 2013, white paper, arXiv:1309.3519.
173. de Caneva, G., Barres de Almeida, U., Lindfors, E., Saito, K., Schultz, C., Sitarek, J., Tavecchio, F., Lucarelli, F., Pittori, C., Vercellone, S., Verrecchia, F., Buson, S., D’Ammando, F., Hayashida, M., Lahteenmaki, A., Tornikoski, M., Hovatta, T., Mundell, C., Steele, I., Nilsson, K., Marscher, A., and Jorstad, S. 2014, “The FSRQs 3C 279 and PKS 1510-089: MAGIC Latest Results and Multiwavelength Observations.” High Energy Phenomena in Relativistic Outflows IV, *International Journal of Modern Physics: Conference Series*, **28**, 1460176 (7 pages).
174. Troitskiy, I.S., Morozova, D.A., Jorstad, S.G., Larionov, V.M., Marscher, A.P., Agudo, I., Blinov, D.A., and Smith, P.S. “Multiwavelength Observations of 6 FSRQ in 2008-2012,” 2014, in *Multiwavelength AGN Surveys and Studies*, IAU Symposium 304, 249–251.
175. Hodgson, J.A., Krichbaum, T.P., Marscher, A.P., Jorstad, S.G., Marti-Vidal, I., Bremer, M., Lindqvist, M., de Vicente, P., and Zensus, A. “The Latest Results from the Global mm-VLBI Array,” 2014, in *2012 EVN Symposium* (6 pages).
176. Hodgson, J.A., Krichbaum, T.P., Marscher, A.P., Jorstad, S.G., Marti-Vidal, I., Lindqvist, M., Bremer, M., Sanchez, S., de Vicente, P., and Zensus, A. “5 year Global 3-mm VLBI survey of

Gamma-ray active blazars,” 2014, in *2014 EVN Symposium* (6 pages).

177. Rani, B., Krichbaum, T.P., Marscher, A.P., Jorstad, S.G., Hodgson, J.A., Fuhrmann, L., and Zensus, A. “Perplexing correlations between Gamma-ray emission and parsec-scale jet orientation variations in the BL Lac object S5 0716+714,” 2014, in *2014 EVN Symposium* (4 pages).

178. Lico, R., Giroletti, M., Orienti, M., Gomez, J.L., Casadio, C., D’Ammando, F., Blasi, M.G., Cotton, W., Edwards, P.G., Fuhrmann, L., Jorstad, S., Kino, M., Kovalev, Y.Y., Krichbaum, T.P., Marscher, A.P., Paneque, D., Piner, B.G., and Sokolovsky, K.V. “Parsec scale polarization properties of the TeV blazar Markarian 421,” 2014, in *2014 EVN Symposium* (6 pages).

179. Giroletti, M., D’Ammando, F., Orienti, M., Paneque, D., Lico, R., Giovannini, G., Gómez, J.L., Jorstad, S., and Marscher, A., for the Fermi-LAT collaboration. “Gamma-ray light curve and VLBI polarization connection in Mrk 421,” 2014, in *2014 Fermi Symposium*, eConf C14102.1 (5 pages).

180. Aller, M.F., Hughes, P.A., Aller, H.D., Jorstad, S.G., Marscher, A.P., Bala, V., and Hovatta, T. “The Extreme Gamma-Ray Blazar S5 0716+714: Jet Conditions from Radio-Band Variability and Radiative Transfer Modeling,” 2015, in *2014 Fermi Symposium*, eConf C14102.1 (6 pages).

181. Jorstad, S.G., Marscher, A.P., Morozova, D.A., Bala, V., Agudo, I., Gómez, J.L., Lähteenmäki, A., Larionov, V.M., Smith, P.S., and Tornikoski, M. “The Jet of the Quasar 4C+21.35 from Parsec to Kiloparces Scales and its Role in High Energy Photon Production,” 2015, in *Extragalactic Jets from Every Angle*, IAU Symposium 313, ed. F. Massaro, C.C. Cheung, E. Lopez, and A. Siemiginowska, 33–38.

182. Marscher, A.P. “Time-variable linear polarization as a probe of the physical conditions in the compact jets of blazars,” 2015, in *Extragalactic Jets from Every Angle*, IAU Symposium 313, ed. F. Massaro, C.C. Cheung, E. Lopez, and A. Siemiginowska, 122–127.

183. Jorstad, S.G., Marscher, A.P., Troitskiy, I., Larionov, V., Morozova, D., and Gurwell, M. “Connection between VHE Events and Parsec-scale Jet Behavior in the TeV Quasar 1222+216,” 2017, High Energy Astrophysics in Southern Africa, **Proc. of Science** [<http://pos.sissa.it>], **275**, article ID 17 (8 pages).

184. Marscher, A.P. “Multi-wavelength Behavior of Blazars: Combined Order & Disorder,” 2017, High Energy Astrophysics in Southern Africa, **Proc. of Science** [<http://pos.sissa.it>], **275**, article ID 16 (9 pages).

185. Pedalletti, G., Mananaro, M., Doert, M., Lindfors, E., Nievas Rosillo, M., Fallah Ramazani, V., Becerra Gonzalez, J., Tanaka, Y., Ojha, R. Finke, J., Jorstad, S., Marscher, A., Larionov, V., Borman, G., Troitskiy, I., Lähteenmäki, A., Tornikoski, M., and Hovatta, T. “The first VHE detection of the blazar S4 0954+65 with the MAGIC telescopes during an exceptionally high optical state,” 2017, in High Energy Gamma-ray Astronomy: 6th International Meeting on High Energy Gamma-Ray Astronomy, *AIP Conference Proceedings*, **1792** ed. F.A. Aharonian, W. Hofmann, and F.M. Rieger, 050028.

186. Feng, Q. (for the VERITAS Collaboration), Jorstad, S.G., Marscher, A.P., Lister, M.L., Kovalev, Y.Y., Pushkarev, A.B., Savolainen, T., Agudo, I., Molina, S.N., Gómez, J.L., Larionov, V.M., Borman, G.A., Mokrushina, A.A., and Smith, P.S. “Multiwavelength observations of the blazar BL Lacertae: a new fast TeV  $\gamma$ -ray flare,” 2017, in Proceedings of the 35th International Cosmic Ray Conference, *Proceedings of Science* (arXiv:1708.06386).



187. Rani, B., Jorstad, S.G., and Marscher, A.P. “High Resolution Polarization Imaging of the Fermi Blazar 3C 279,” 2018, in 2017 Fermi Symposium, **Proceedings of Science**, **312**, ed. J. Greiner and O. Reimer, article ID 020.

188. Marshall, H.L., Heine, S.N., T., Garner, A., Gullikson, E.M., Günther, H.M., Leitz, C., Masterson, R., Miller, E.D., Zhang, W., Boissay Malaquin, R., Caiazzo, I., Chakrabarty, D., Davidson, R., Gallo, L.C., Heilmann, R.K., Heyl, J., Kara, E., Marscher, A., and Schulz, N.S. “A small satellite version of a broad-band soft x-ray polarimeter,” 2021, *Proceedings of the SPIE*, **11444**, article ID 114442Y (20 pages).